

**PORT OF BROOKINGS HARBOR**  
**Regular Commission Meeting**  
**Wednesday, November 17, 2021 • 2:00pm**  
**Teleconference / Meeting Room (limited capacity)**  
**16350 Lower Harbor Road Suite 202, Harbor OR, 97415**

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**Teleconference Call-In Number: 1 (253) 215-8782**

**Meeting ID: 771 205 4017**

**Passcode: 76242021**

**(to mute/unmute: \* 6)**

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**TENTATIVE AGENDA**

**1. CALL MEETING TO ORDER**

- Pledge of Allegiance
- Roll Call
- Modifications, Additions, and Changes to the Agenda
- Declaration of Potential Conflicts of Interest

**2. APPROVAL OF AGENDA**

**Page**

**3. APPROVAL OF MEETING MINUTES**

- A. Approve Minutes of Special Commissioner Meeting Thursday October 7, 2021..... 3
- B. Approve Minutes of Regular Commissioner Meeting Wednesday October 20, 2021..... 5
- C. Approve Minutes of Special Commissioner Meeting Thursday October 28, 2021..... 8

**4. PUBLIC COMMENTS** – (Limited to a maximum of three minutes per person. Please email your comments to [portmanager@portofbrookingsharbor.com](mailto:portmanager@portofbrookingsharbor.com) prior to the meeting. Please wait to be called on before speaking).

**5. MANAGEMENT REPORTS**

- A. October 2021 Safety & Security Report, presented by Danielle King..... 10
- B. October 2021 Financial Report, presented by Gary Dehlinger..... 12
- C. October 2021 Harbormaster Report, presented by Travis Webster..... 32
- D. October 2021 Port Manager Report, presented by Gary Dehlinger..... 36

**6. ACTION ITEMS**

- A. Resolution 2021-12 Adopting Property Tax Payment Policy..... 43
- B. Charter Fee Change Request..... 45
- C. Warranty Information on New Ford Vehicles..... 46
- D. Chetco River Bar Camera Sponsorship Agreement..... 56
- E. Public Dock Equipment Use Agreement & Release..... 59
- F. Bell & Whistle Coffee Shop Lease Renewal..... 61
- G. Shanebrook Media Location Agreement..... 63
- H. Henry Johnson Draft Appreciation Letter..... 66
- I. Strategic Business Plan Annual Review..... 68
- J. Business Oregon General Application SPWF, FEMA DR-4432 Mitigation and Repair..... 85
- K. Business Oregon General Application SPWF, FEMA DR-4452 Mitigation and Repair..... 216

**7. INFORMATION ITEMS**

- A. Harbor Water District – Wastewater Treatment Plant Information..... 347
- B. Request For Qualifications (RFQ) for General Counsel Services..... 361
- C. DEQ Stormwater Testing Results..... 368

**8. COMMISSIONER COMMENTS**

A request for an interpreter for the hearing impaired, for those who want to participate but do not have access to a telephone, or for other accommodations for persons with disabilities should be made at least 48 hours in advance of the meeting to Port of Brookings Harbor Office at 541-469-2218.

**PORT OF BROOKINGS HARBOR**  
**Regular Commission Meeting**  
**Wednesday, November 17, 2021 • 2:00pm**  
**Teleconference / Meeting Room** *(limited capacity)*  
**16350 Lower Harbor Road Suite 202, Harbor OR, 97415**

**9. NEXT REGULAR MEETING DATE** – Wednesday December 15, 2021 at 2:00pm

**10. ADJOURNMENT**

A request for an interpreter for the hearing impaired, for those who want to participate but do not have access to a telephone, or for other accommodations for persons with disabilities should be made at least 48 hours in advance of the meeting to Port of Brookings Harbor Office at 541-469-2218.

*This Institution is an Equal Opportunity Provider*

**MINUTES OF  
SPECIAL MEETING OF THE BOARD OF COMMISSIONERS  
PORT OF BROOKINGS HARBOR DISTRICT**

**Thursday, October 7, 2021**

*This is not an exact transcript. The audio of the session is available on the Port's website.*

The Port of Brookings Harbor District met for a workshop session on the above date at 10:00am. Open session at the Port Conference Room, 16350 Lower Harbor Road Suite 202, Harbor OR, 97415 and also via teleconference.

**1. CALL MEETING TO ORDER**

Commission President Richard Heap called the Special Meeting of the Port of Brookings Harbor of Commissioners to order at 10:00am.

- **Commissioners Present:**  
Joseph Speir, Vice-President (Pos. #1); Sharon Hartung Secretary/Treasurer (Pos. #2); Larry Jonas (Pos. #3); Richard Heap, President (Pos. #4); and Kenneth Range (Pos. #5).
- **Management and Staff:**  
Gary Dehlinger, Port Manager; Danielle King, Safety / Health / Environmental Coordinator
- There was no modifications, additions, or changes to the agenda.
- There was no declaration of potential conflicts of interest.

**2. APPROVAL OF AGENDA – Audio time 2:57**

**A motion was made by Speir and seconded by Range to approve the agenda as written. The motion passed 5 – 0.**

**3. PUBLIC COMMENTS – Audio time 3:17**

There was no public comment.

**4. ACTION ITEMS**

- A. RV Park Improvements Bid Award – Audio time 3:25  
Dehlinger noted the bid opening was held at Crow/Clay Associates on September 30, 2021. Crow/Clay Associates reviewed the bids received and provided their recommendation to award.

**A motion was made by Range and seconded by Speir to approve the RV Park Improvements award to the low bidder, McLennan Excavation Inc., in the amount of \$657,000. The motion passed 5 – 0.**

**5. INFORMATION ITEMS**

- A. None

**6. COMMISSIONER COMMENTS – Audio time 8:36**

There were no commissioner comments.

**7. NEXT REGULAR MEETING DATE – New date and time Wednesday, October 20, 2021 at 2:00 pm.**

**8. ADJOURNMENT** – Audio time 11:25

Having no further business, the meeting adjourned at 10:11 am.

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Sharon Hartung, Secretary/Treasurer

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Date Signed

*An audio recording was made of these proceedings. The recording and the full commission packet are available on the Ports website: [www.portofbrookingsharbor.com](http://www.portofbrookingsharbor.com).*

**DRAFT MINUTES  
REGULAR MEETING OF THE BOARD OF COMMISSIONERS  
PORT OF BROOKINGS HARBOR DISTRICT**

**Wednesday, October 20, 2021**

*This is not an exact transcript. The audio of the session is available on the Port's website.*

The Port of Brookings Harbor District met in regular session on the above date at 2:00pm. Open session at the Port Conference Room, 16350 Lower Harbor Road Suite 202, Harbor OR, 97415 and also via teleconference.

**1. CALL MEETING TO ORDER**

Commission President Richard Heap called the Regular Meeting of the Port of Brookings Harbor of Commissioners to order at 2:00pm.

- All participants stated the Pledge of Allegiance.
- **Commissioners Present:**  
Joseph Speir, Vice-President (Pos. #1); Larry Jonas (Pos. #3); Richard Heap, President (Pos. #4); and Kenneth Range (Pos. #5). Sharon Hartung Secretary/Treasurer (Pos. #2) was absent.
- **Management and Staff:**  
Gary Dehlinger, Port Manager; Travis Webster, Harbormaster; Danielle King, Safety/Administrative; and Martha Rice, Port Legal Counsel via phone.
- There was no modifications, additions, or changes to the agenda.
- There was no declaration of potential conflicts of interest.

**2. APPROVAL OF AGENDA – Audio time 3:30**

**A motion was made by Jonas and seconded by Speir to approve the agenda as written. The motion passed 4 – 0.**

**3. APPROVAL OF MEETING MINUTES – Audio time 3:50**

- Draft Minutes of Regular Commissioner Meeting Tuesday September 21, 2021.

**A motion was made by Jonas and seconded by Speir to approve Meeting Minutes. The motion passed 4 – 0.**

**4. PUBLIC COMMENTS – Audio time 4:25**

There were two public comments submitted by Mike Murphy and Dan Fraser on non-agenda items. Mike Murphy commented on security gates at Basin 2 near F-Dock and on wastewater treatment plant. Dan Fraser provided a handout and summary on the wastewater treatment plant.

**5. US FISH AND WILDLIFE SERVICE - POTENTIAL REINTRODUCTION OF SEA OTTERS – Audio time 12:33**

Michele Zwartjes, US Fish and Wildlife Service provided a summary of the potential reintroduction of sea otters. Commissioner Heap mention the need for a management plan prior to the reintroduction.

**6. MANAGEMENT REPORTS – Audio time 21:06**

5

- Financial Report – September 2021.  
Dehlinger reported the end of the month financials for September 2021. Port paid the 3rd Quarterly payment to Business Oregon for \$86,620. Port is now paying \$77,500 per quarter and during this period sold assets (abandon sailboats) which 80% of the sales go towards paying off the debt that totaled \$9,120. The other 20% is transferred to the Reserve Fund.
- Harbormaster Report – September 2021. Audio time 23:44  
Webster reported on the harbormaster report. Reviewed the RV Park occupancy, boat launches, telehandler and travel lift operations for the month. Port staff completed 88 work orders during the month.
- Port Manager Report – September 2021. Audio time 26:39  
Dehlinger reported on the Port manager report. Reviewed safety and security reports for the month of September.

**A motion was made by Speir and seconded by Jonas to approve the management reports for September 2021 as discussed. The motion passed 4 – 0.**

## 7. ACTION ITEMS

- A. Resolution 2021-11 Adopting Public Dock Hoist Rates and Use Agreement – Audio time 31:57  
Heap noted this resolution memorializes the Board approval to change the regular meeting date and time last month.

**A motion was made by Speir and seconded by Range to approve draft Resolution No. 2021-11 Adopting Public Dock Hoist Rates and Use Agreement. The motion passed 4 – 0.**

- B. Port Vehicles Procurement Approval – Audio time 34:28  
Dehlinger discussed the purpose of purchasing new vehicles for staff. Commissioner Range asked about the additional charges for tax and wanted to know more about extended warranties. Also concerned about purchasing vehicles and the need for future matching dollars for projects.

**A motion was made by Speir and seconded by Jonas to approve the purchase of two 2022 Ford Maverick XL – Supercrew trucks at \$19,893 plus DMV and tax fees each for the Port Manager and Harbormaster. Once the trucks arrive, the Port Manager’s car allowance would be removed from the contract. Bring back extended warranty details and costs for Board approval at the next meeting. The motion passed 4 – 0.**

- C. Port Paying Lease Property Tax – Audio time 51:44  
Dehlinger noted lease tenants are responsible for property taxes, but the Port has no procedure on how the taxes are paid. Past Port practice is to mail the property statements to the tenants to be paid directly by the tenant. The Port is ultimately responsible for any taxes not paid. Requesting the Port to pay the taxes upfront and then invoice tenants for the amounts. Resolution will be drafted if approved.

**A motion was made by Speir and seconded by Range to approve the Port paying Curry County Real Property Tax and then invoicing the tenant for reimbursement. The motion passed 4 – 0.**

- D. FEMA Engineering Services Award – Audio time 57:20  
Dehlinger noted the Port received one proposal from EMC Engineers/Scientists prior to the RFP deadline of October 18, 2021. Port staff completed its selection evaluation and has recommended EMC Engineers/Scientists.

**A motion was made by Speir and seconded by Jonas to approve the Professional Engineering Services for FEMA DR-4432 & DR-4452 award to EMC Engineers/Scientists LLC, in the amount of not-to-exceed \$250,000. The motion passed 4 – 0.**

- E. RV Park Improvements Contract Approval – Audio time 32:45  
Dehlinger noted the draft contract to McLennan Excavation for the RV Park Improvement Project was written by Crow/Clay & Associates and reviewed by port legal.

**A motion was made by Speir and seconded by Range to approve draft contract to McLennan Excavation Inc. for the Beachfront RV Park Improvements. The motion passed 4 – 0.**

**8. INFORMATION ITEMS**

- A. DEQ Tier II Requirements – Audio time 1:04:30  
Dehlinger noted the Port received notice of triggering Tier II requirements from DEQ. DEQ requires a corrective actions response by December 31, 2021. The company that provided the Port Stormwater Pollution Control Plan Aquarius Environmental will be working on the corrective action response for the Port.
- B. Feature Film Production on Port Property – Audio time 1:12:26  
Dehlinger noted a feature film company contacted the Port to film some scenes on Port docks and property within the next couple of weeks. Film company has completed the event use permit and provided insurance.
- C. Tidewinds Sportfishing Request to Change Charter Fees – Audio time 1:14:35  
Dehlinger noted the Port received a letter from Tidewinds Sportfishing requesting a change to the charter fee rates at the Port. Current Port fees are based on per boat person capacity. Most other Ports in Oregon charge a flat fee per vessel. Staff and Board will review the Charter Fee at the next regular scheduled meeting.

**9. COMMISSIONER COMMENTS – Audio time 1:18:46**

Commissioner Range – Wanted to thank Henry for the beach toys and asked if the Port formally thanked him.  
Commissioner Heap – Noted the chinook river stock collection came up with a lot of fish and indications of the ocean return is improving.

**10. NEXT REGULAR MEETING DATE – Wednesday, November 17, 2021 at 2:00pm.**

**11. ADJOURNMENT – Audio time 1:22:13**

Having no further business, the meeting adjourned at 3:20pm.

\_\_\_\_\_  
Sharon Hartung, Secretary/Treasurer

\_\_\_\_\_  
Date Signed

*An audio recording was made of these proceedings. The recording and the full commission packet are available on the Ports website: [www.portofbrookingsharbor.com](http://www.portofbrookingsharbor.com).*

**DRAFT MINUTES OF  
SPECIAL MEETING OF THE BOARD OF COMMISSIONERS  
PORT OF BROOKINGS HARBOR DISTRICT**

**Thursday, October 28, 2021**

*This is not an exact transcript. The audio of the session is available on the Port's website.*

The Port of Brookings Harbor District met for a workshop session on the above date at 9:00am. Open session at the Port Conference Room, 16350 Lower Harbor Road Suite 202, Harbor OR, 97415 and also via teleconference.

**1. CALL MEETING TO ORDER**

Commission Vice-President Speir called the Special Meeting of the Port of Brookings Harbor of Commissioners to order at 9:00am.

- **Commissioners Present:**  
Joseph Speir, Vice-President (Pos. #1); Sharon Hartung Secretary/Treasurer (Pos. #2); Larry Jonas (Pos. #3); and Kenneth Range (Pos. #5). Richard Heap, President (Pos. #4) was absent.
- **Management and Staff:**  
Gary Dehlinger, Port Manager; and Danielle King, Safety / Health / Environmental Coordinator
- There was no modifications, additions, or changes to the agenda.
- There was no declaration of potential conflicts of interest.

**2. APPROVAL OF AGENDA – Audio time 2:09**

**A motion was made by Range and seconded by Jonas to approve the agenda as written. The motion passed 4 – 0.**

**3. PUBLIC COMMENTS – Audio time 2:25**

There was no public comment.

**4. ACTION ITEMS**

- A. FEMA DR-4432/4452 Professional Engineering Service Contract Approval – Audio time 2:50  
Dehlinger noted the Board awarded the engineering services to EMC Engineers/Scientists on October 20, 2021. The engineering service agreement is for three years, ending October 28, 2024, with an option to extend the agreement one year at the end of the term. There were no award protests. Contract was reviewed by port legal.

**A motion was made by Hartung and seconded by Range to approve EMC Engineers/Scientists, LLC Professional Services Agreement for the FEMA DR-4432 and DR-4452 projects. The motion passed 4 – 0.**

**5. INFORMATION ITEMS**

- A. None

**6. COMMISSIONER COMMENTS – Audio time 4:24**

Commissioner Range – Provided an article on ‘cell-grown’ salmon and discussion followed.

**7. NEXT REGULAR MEETING DATE – Wednesday November 17, 2021 at 2:00 pm.**

8



8. **ADJOURNMENT** – Audio time 8:29

Having no further business, the meeting adjourned at 9:07am.

\_\_\_\_\_  
Sharon Hartung, Secretary/Treasurer

\_\_\_\_\_  
Date Signed

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# SAFETY, SECURITY, AND ENVIRONMENTAL

## MONTHLY REPORT

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**Date:** November 17, 2021  
**Period:** October 2021  
**To:** Gary Dehlinger, Port Manager  
**Issued By:** Danielle King, Safety, Security, & Environmental Coordinator

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### Safety

Port maintenance staff was trained on vehicle safety, while Port office staff was trained on computer eye strain.

Overton Safety Training, Inc came to the Port and trained staff on overhead crane & rigging safety training.

Port staff had one first aid case in the month. Employee tripped on a rock and fell while checking a vehicle for a boat launch ticket in the boat launch parking lot.

### Incidents

Port staff replaced the shower head spigot in the women's commercial basin restroom, this is the third time they have had to replace a shower spigot. We have changed the bathroom code for the second time, due to vandalism or drug use.

Boat Launch Restroom, someone ripped the men's bathroom stall from the wall hinge, Port staff is still waiting on parts to replace the door.

Hallmark fisheries was moving a customer's gear around, when a person who was sleeping in the middle of the gear popped out, hallmark moved them along. Security was informed of the incident.

### Security

OrCal Security and POBH recorded (88) security issues for this month, creating a total of (817) this year. Issues included:

- (28) Overnight parking tickets.
- (38) Vehicles missing or unable to read boat launch ticket.
- (3) Parking violations throughout the port.
- (3) No camping warnings.
- (14) Parking violations for vehicles parked in the boat launch parking lot trailer stall.
- (1) Unhitched trailer in retail parking lot.
- (1) Maintenance report for lightbulbs out.
- (1) closed gate to boat yard

### Environmental / DEQ 1200-Z Industrial Stormwater

Port staff was notified by a tenant that a boat has sunk in Basin 1, E dock. Absorbent booms were placed around the vessel and proceeded to rescue the boat. The owner had a trailer available, once the vessel was no longer submerged Port staff towed the vessel to the launch ramp and owner removed vessel from the harbor. National Response Center, Oregon Emergency Response System, and SDAO was notified of the incident.

Semi-truck receiving product from cold storage was in the process of backing into the loading/unloading ramp, hit a salmon gantry in the gear storage area, puncturing a hole in the diesel fuel tank. This caused diesel fuel to spill onto the ground of the gear storage and the loading/unloading ramp of cold storage. 5R Excavation and Port staff cleaned up the spill. Contaminated soil was properly disposed of by CTR. DEQ 1200Z Spill Log and Spill/Release Report was completed.

Monthly inspections were completed as required by our Stormwater Pollution Control Plan (SWPCP). Stormwater testing was completed during the recent storms. This was the third of four required tests this year.

# FINANCIAL SUMMARY REPORT

**Date:** November 17, 2021  
**Period:** Month End Report of Financial Activities for October 2021  
**To:** Honorable Board President and District Board Members  
**Issued by:** Gary Dehlinger, Port Manager

## October 2021 Financial Reports

### Overview / Comments

#### Balance Sheet

End of the month unrestricted cash and equivalents totaled \$455,087. Restricted cash and equivalents totaled \$967,325, with Total Assets (cash) at \$1,417,995.

#### October Profit & Loss

Total revenues from all funds were \$264,887. Total expenses were \$294,906\*. The net income for October was negative \$30,019.

\$49,612 was transferred out of the General Fund to Debt, Capital Project and Reserve Funds.

October Revenue Centers		Expenses
Marina**	\$69,200	\$139,785
Beachfront RV Park	\$33,725	\$19,564
Commercial / Retail	\$46,013	\$13,618
Fuel Dock	\$65,792	\$58,923

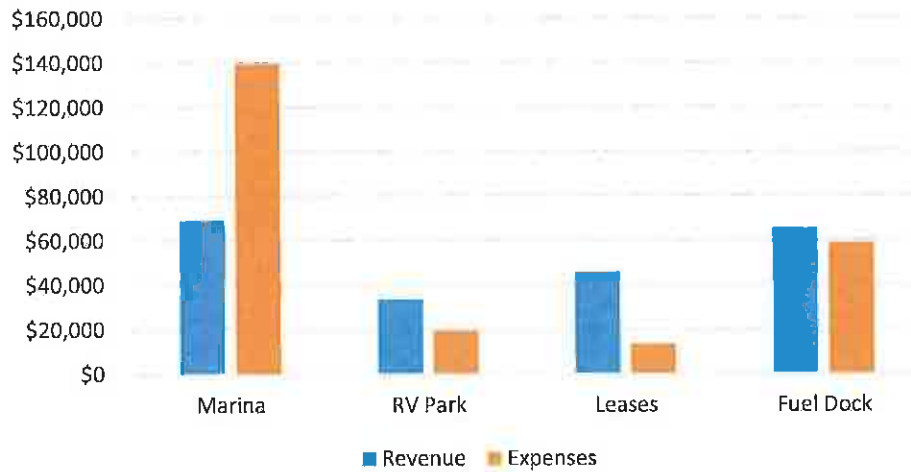
\*\*Marina includes Administrative costs.

Unusual expenses this month include:

	Amount	Company	Description
1	\$17,430	Oregon Alarms	Purchase 20 security cameras and hardware for installation.
2	\$10,411	Oregon Public Ports Association	Annual dues for SDAO/OPPA.
3	\$3,900	The Roofers	Completion of roof repairs on Blue Fin lease building.
4	\$3,770	Overton Safety Training, Inc	Crane operator safety training on the Travel Lift.
5	\$2,321	Freeman Rock	Rock to finish landscaping along Lower Harbor Road
6	\$1,934	5R Excavation	Emergency fuel spill cleanup in gear storage. Amount is reimbursable to responsible party.
7	\$1,650	EMC Engineers/Scientists	General engineering services on the wastewater treatment plant, DEQ Tier II and Port FEMA planning.
8	\$1,191	Pape Material Handling	Repair DEF emissions system on Eq# 3710 Reachlift
9	\$1,062	Crescent ACE Hardware	Rent scaffolding for Port staff work replacing rot siding on Blue Fin lease building.
10	\$906	Tank Testers	Repair fuel leak from piping inside sump at the aboveground fuel tanks.
11	\$455	Roto Rooter	Pump out service for cleaning the oil water separator at the aboveground fuel tanks.
12	\$410	Platt	Purchase electrical boxes for the new security cameras.

13	\$384	Travel Information Council	Annual dues for HWY 101 Beachfront RV sign.
14	\$329	Kendrick Equipment	Repair parts for Eq# 4605 Travel Lift
15	\$263	John's Portable Welding	Repair ramp guides and weld security camera stands.
16	\$224	Harbor Logging Supply	Materials to repair ramp guides and security camera stands.
17	\$152	Englund Marine Supply	Replace bilge pump and float switch on Eq# 3705 Port Boat.

### October 2021



Total revenue and expenses for this month from General Fund operations.



Breakdown of expenses for this month from General Fund. Note: less than 1% not included.

\* Depreciation expense is not included in the budget or in our financial reports. If depreciation expense was included in the budget it would be difficult to balance the budget, and depreciation is not a cash expense, required under Generally Accepted Accounting Principles (GAAP), but not Governmental Accounting Standards Board (GASB).

**Fiscal Year Profit & Loss vs. Budget Performance (July 1, 2021 thru June 30, 2022)**

We have completed four (4) months of the fiscal year July 1 thru October 30; the year is 33.3% complete.

✓ **Income**

*Any number above 33.3% is ahead of budget.*

Total Income 37.6% or **4.3% ahead of budget.**

Port's overall income is ahead of budgeted expectations.

General Fund Program Revenue is 35.9% or **2.6% ahead of budget.**

Port's general revenue centers are ahead of budgeted expectations.

✓ **Expenses**

*Any number below 33.3% is ahead of budget.*

Total Expense 18.1% or **15.2% below budget.**

This is due to FEMA Projects estimated to begin this fiscal year which has not spent funding.

General Fund Expenditure is 33.1% or **0.2% below budget.**

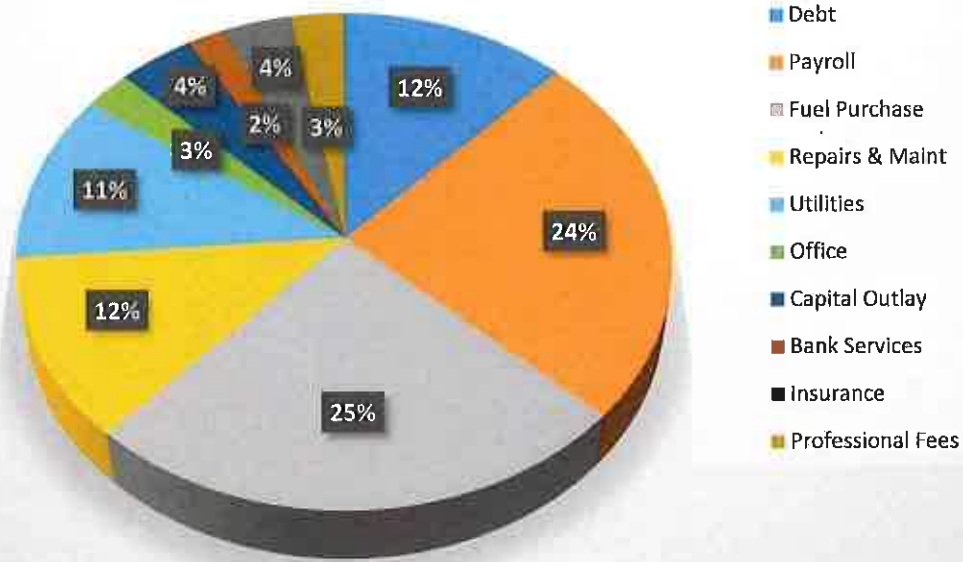
Port's general fund expenditures is on pace with budgeted expectations.

FY 2021 - 2022 - July 1 thru October 30



Total revenue and expenses for this fiscal year from General Fund operations.

## General Fund FY 2021-22 Expenses - \$1,062,731



Breakdown of expenses from General Fund. Note: less than 1% not included.

### ATTACHMENTS

- Port Balance Sheet as of October 31, 2021, 2 pages
- Profit & Loss October 2021, 3 pages
- Profit & Loss Budget Performance, July 2021 thru October 2021, 4 pages
- October 2021 Check Register, 3 pages
- Vendor Expense Report for January thru October 2021, 4 pages

**Port of Brookings Harbor  
Balance Sheet**

Cash Basis

As of October 31, 2021

	Oct 31, 21
<b>ASSETS</b>	
Current Assets	
Checking/Savings	
100 · UNRESTRICTED CASH & EQUIVALENTS	
101 · GENERAL FUND CHECKING & LGIP	
10103 · General Funds Ckg Umpqua 3634	181,524.59
10104 · RCU Business Ownership 0687	17.69
10105 · RCU Business Savings 0600	10.00
10106 · General Fund LGIP 6017	243,637.36
10107 · Dredging Fund LGIP 6254	27,708.75
Total 101 · GENERAL FUND CHECKING & LGIP	452,898.39
10101 · Petty Cash	479.05
10102 · COUNTER CASH	
10102.1 · Office/Reception Cash Drawer	400.00
10102.2 · RV Park Cash Drawer	510.00
10102.3 · Fuel Dock Cash Drawer	800.00
Total 10102 · COUNTER CASH	1,710.00
Total 100 · UNRESTRICTED CASH & EQUIVALENTS	455,087.44
110 · RESTRICTED CASH & EQUIVALENTS	
104 · RESTRICTED MONEY MKT & CHECKING	
20104 · USDA BOND Umpqua MM 9529	2,520.43
30104 · Debt Service Umpqua MM 8627	2,515.51
40104 · Capital Projects Umpqua 8018	2,500.00
Total 104 · RESTRICTED MONEY MKT & CHECKING	7,535.94
105 · RESTRICTED LGIP	
20105 · USDA Bond Fund LGIP 6021	143,435.37
30105 · IFA Debt Service Fund LGIP 6020	46,192.52
50105 · Reserve Fund LGIP 6018	197,574.91
70105 · Capital Projects LGIP 6273	
40105.2 · Government Funds	16,798.19
70105.2 · Port Construction Fund	555,788.37
Total 70105 · Capital Projects LGIP 6273	572,586.56
Total 105 · RESTRICTED LGIP	959,789.36
Total 110 · RESTRICTED CASH & EQUIVALENTS	967,325.30
Total Checking/Savings	1,422,412.74
Accounts Receivable	
120 · ACCOUNTS RECEIVABLE	-8,198.58
Total Accounts Receivable	-8,198.58
Other Current Assets	
150 · Undeposited Funds	3,780.76
Total Other Current Assets	3,780.76
Total Current Assets	1,417,994.92
<b>TOTAL ASSETS</b>	<b>1,417,994.92</b>
<b>LIABILITIES &amp; EQUITY</b>	
Liabilities	



**Port of Brookings Harbor  
Balance Sheet**

As of October 31, 2021

Cash Basis

	Oct 31, 21
<b>Current Liabilities</b>	
<b>Credit Cards</b>	
106 · RCU VISA ACCT	1,865.52
106.1 · RCU Business Ownership 0687	17.69
106.2 · RCU Business Savings 0600	10.00
<b>Total Credit Cards</b>	1,893.21
<b>Other Current Liabilities</b>	
100222 · Payroll Liabilities	
10222 · HealthCare Premium - Dependent	-1,165.52
<b>Total 100222 · Payroll Liabilities</b>	-1,165.52
10226 · Lodging Tax Payable	7,737.39
<b>Total Other Current Liabilities</b>	6,571.87
<b>Total Current Liabilities</b>	8,465.08
<b>Total Liabilities</b>	8,465.08
<b>Equity</b>	
<b>300 · Fund Balance</b>	
<b>301 · Unappropriated Balance</b>	
10301 · General Fund Unappropriated Bal	532,465.33
20301 · Revenue Bond Unappropriate Bal	102,351.92
30301 · Debt Service Unappropriated Bal	22,758.51
40301 · Capital Project Unappropriated	40,430.77
50301 · Reserve Fund Unappropriated Bal	186,938.63
70301 · Port Const. Fund Unappropriated	569,448.67
<b>Total 301 · Unappropriated Balance</b>	1,454,393.83
<b>302 · Appropriated Carryover</b>	
10302 · General Fund Appropriated Carry	-532,465.33
20302 · Revenue Bond Appropriated Carry	-102,351.92
30302 · Debt Service Appropriated Carry	-22,758.51
40302 · Capital Proj Appropriated Carry	-40,430.77
50302 · Reserve Fund Appropriated Carry	-186,938.63
70302 · Port Const. Fund Appropriated	-569,448.67
<b>Total 302 · Appropriated Carryover</b>	-1,454,393.83
<b>Total 300 · Fund Balance</b>	0.00
<b>Net Income</b>	1,409,529.84
<b>Total Equity</b>	1,409,529.84
<b>TOTAL LIABILITIES &amp; EQUITY</b>	1,417,994.92

**Port of Brookings Harbor  
Profit & Loss**

Cash Basis

October 2021

	Oct 21
<b>Income</b>	
<b>400 · REVENUES</b>	
<b>401 · GENERAL FUND REVENUES</b>	
10413 · Property Tax Prior	865.84
10414 · Interest General Fund	158.81
10417 · Assets Sales	2,800.00
10418 · Miscellaneous	2,107.72
<b>Total 401 · GENERAL FUND REVENUES</b>	5,932.37
<b>402 · GENERAL FUND PROGRAM REVENUES</b>	
<b>10421 · MARINA</b>	
<b>10421.2 · MOORAGE</b>	
10421.3 · Commercial Slip Rent	10,365.77
10421.4 · Recreational Slip Rent	37,589.68
10421.5 · Transient	1,849.01
10421.6 · Other Moorage	570.00
<b>Total 10421.2 · MOORAGE</b>	50,374.46
10422 · OTHER MARINA REVENUE	2,190.75
<b>10423 · STORAGE</b>	
10423.1 · Gear Storage	3,269.96
10423.2 · Boat Storage	2,099.00
<b>Total 10423 · STORAGE</b>	5,368.96
10424 · ADMINISTRATIVE FEES	1,016.89
<b>10425 · MARINE SERVICES</b>	
10425.1 · Travellift	2,786.00
10425.2 · 12 K Telehandler	660.00
10425.3 · Other Sales & Fees	457.00
<b>Total 10425 · MARINE SERVICES</b>	3,903.00
10426 · PROPERTY GROUND EVENT USE	200.00
<b>Total 10421 · MARINA</b>	63,054.06
<b>10427 · BEACHFRONT RV PARK</b>	
10427.1 · Space Rental	31,133.86
10427.2 · Other Sales & Fees	2,591.00
<b>Total 10427 · BEACHFRONT RV PARK</b>	33,724.86
<b>10428 · COMMERCIAL RETAIL</b>	
10428.1 · Retail Property	27,248.15
10428.2 · Docks	15,995.68
10428.3 · CPI and Other Fees	1,546.04
<b>Total 10428 · COMMERCIAL RETAIL</b>	44,789.87
10429 · FUEL DOCK	67,375.51
<b>Total 402 · GENERAL FUND PROGRAM REVENUES</b>	208,944.30
<b>420 · USDA REVENUE BOND FUND</b>	
20414 · Interest Revenue Bond Fund	59.53
20419 · Transfer to USDA Bond Fund	10,843.00
<b>Total 420 · USDA REVENUE BOND FUND</b>	10,902.53
<b>430 · DEBT SERVICE FUND REVENUE</b>	
30414 · Interest Debt Service Fund	19.25
30419 · Transfer to Debt Service Fund	31,958.71
<b>Total 430 · DEBT SERVICE FUND REVENUE</b>	31,977.96
<b>450 · RESERVE FUND REVENUE</b>	
50414 · Interest Reserve Fund	81.97

**Port of Brookings Harbor  
Profit & Loss**

Cash Basis

October 2021

	Oct 21
50419 · Transfer to Reserve Fund	2,000.00
<b>Total 450 · RESERVE FUND REVENUE</b>	<b>2,081.97</b>
460 · DEBT SERV. RV PARK IMPROV. FUND	
60419 · Transfer OR FFC 2020 Debt Serv.	4,809.87
<b>Total 460 · DEBT SERV. RV PARK IMPROV. FUND</b>	<b>4,809.87</b>
470 · PORT CONSTRUCTION FUND REVENUE	
70414 · Interest Port Construction Fund	238.18
<b>Total 470 · PORT CONSTRUCTION FUND REVENUE</b>	<b>238.18</b>
<b>Total 400 · REVENUES</b>	<b>264,887.18</b>
<b>Total Income</b>	<b>264,887.18</b>
<b>Gross Profit</b>	<b>264,887.18</b>
<b>Expense</b>	
600 · GENERAL FUND EXPENDITURES	
10900 · Operating Transfers Out General	49,611.58
500 · PERSONNEL SERVICES	
10501 · Port Manager	6,528.00
10502 · Port Office Staff	8,857.89
10503 · RV Park Office Staff	4,245.35
10504 · Operations Staff	19,992.06
10505 · Overtime	486.45
10506 · Payroll Taxes/Costs/Benefits	
10506.2 · Sick Leave Benefit	431.66
10506.3 · Vacation & Vehicle Allowance	12,120.88
10506.4 · Payroll Taxes	4,900.10
10506.5 · SEP Retirement	4,361.36
<b>Total 10506 · Payroll Taxes/Costs/Benefits</b>	<b>21,814.00</b>
10508 · Health Care and Dental	8,008.80
<b>Total 500 · PERSONNEL SERVICES</b>	<b>69,932.55</b>
601 · GENERAL FUND Material & Service	
10601 · ADVERTISING & NOTIFICATIONS	544.20
10602 · REPAIRS & MAINTENANCE	
10602.1 · Equip. Repair/Maintenance	1,520.30
10602.2 · Supplies	6,377.02
10602.3 · Services	16,232.68
<b>Total 10602 · REPAIRS &amp; MAINTENANCE</b>	<b>24,130.00</b>
10603 · FUEL purchased for resale	55,734.28
10605 · UTILITIES	
10605.1 · Electric	8,169.45
10605.2 · RV Park Cable TV	595.06
10605.3 · Sanitary	5,850.66
10605.5 · Telecommunications	1,071.68
10605.6 · Waste Removal	10,124.63
10605.7 · Water	2,400.32
<b>Total 10605 · UTILITIES</b>	<b>28,211.80</b>
10606 · OFFICE EXPENSE	14,461.26
10607 · BANK SERVICE & FINANCE FEES	4,142.88
10608 · TRAINING & TRAVEL	3,847.61
10609 · PERMITS, LICENSES, TAXES & MISC	44.95
10610 · INSURANCE; PROP & CAS, BOND	9,216.36
10611 · PROFESSIONAL FEES	
10611.2 · Attorney	865.00
10611.3 · Engineering	1,650.00
10611.4 · Other Support/Consultant	1,266.04

**Port of Brookings Harbor  
Profit & Loss**

Cash Basis

October 2021

	Oct 21
70611 · Engineer/Consultants/Port Const	1,047.85
Total 10611 · PROFESSIONAL FEES	4,828.89
Total 601 · GENERAL FUND Material & Service	145,162.23
710 · GENERAL FUND CAPITAL OUTLAY	
10704 · Equipment	17,892.88
Total 710 · GENERAL FUND CAPITAL OUTLAY	17,892.88
600 · GENERAL FUND EXPENDITURES - Other	70.56
Total 600 · GENERAL FUND EXPENDITURES	282,669.80
630 · DEBT SERVICE FUND EXPENDITURES	
801 · Principal	
30803P · 50 BFMII Travelift Principal	4,155.56
30804P · 2018 Genie Forklift Principal	1,194.18
Total 801 · Principal	5,349.74
810 · Interest Payments	
30813I · 50 BFMII Travelift Interest	503.44
30814I · 2018 Genie Forklift Interest	270.53
Total 810 · Interest Payments	773.97
Total 630 · DEBT SERVICE FUND EXPENDITURES	6,123.71
640 · CAPT. PROJ. EXPENDITURES	
740 · CAPT. PROJ. CAPITAL OUTLAY	
40702 · Land Improvement - Capt Proj	
40702.2 · Supplies	922.58
40702.3 · Services	380.00
Total 40702 · Land Improvement - Capt Proj	1,302.58
Total 740 · CAPT. PROJ. CAPITAL OUTLAY	1,302.58
Total 640 · CAPT. PROJ. EXPENDITURES	1,302.58
660 · DEBT SERV. RV PARK EXPENDITURES	
60806P · RV Park Improv. Loan Principal	3,209.52
60815I · RV Park Improv. Loan Interest	1,600.35
Total 660 · DEBT SERV. RV PARK EXPENDITURES	4,809.87
Total Expense	294,905.96
Net Income	-30,018.78

**Port of Brookings Harbor**  
**Profit & Loss Budget Performance**  
 July through October 2021

Cash Basis

	Jul - Oct 21	Budget	% of Budget
<b>Income</b>			
<b>400 · REVENUES</b>			
<b>401 · GENERAL FUND REVENUES</b>			
10411 · Cash Carry Over	532,465.33	300,000.00	177.5%
10412 · Property Tax Current	0.00	240,000.00	0.0%
10413 · Property Tax Prior	5,480.84	9,000.00	60.9%
10414 · Interest General Fund	797.26	2,000.00	39.9%
10415 · Loans - General Fund	0.00	0.00	0.0%
10417 · Assets Sales	18,520.00	50,000.00	37.0%
10418 · Miscellaneous	15,552.11	31,500.00	49.4%
10420 · Grants & Other Funding - GF	0.00	80,000.00	0.0%
<b>Total 401 · GENERAL FUND REVENUES</b>	<b>572,815.54</b>	<b>712,500.00</b>	<b>80.4%</b>
<b>402 · GENERAL FUND PROGRAM REVENUES</b>			
<b>10421 · MARINA</b>			
<b>10421.2 · MOORAGE</b>			
10421.3 · Commercial Slip Rent	36,103.76		
10421.4 · Recreational Slip Rent	134,689.45		
10421.5 · Transient	5,972.06		
10421.6 · Other Moorage	5,250.00		
10421.2 · MOORAGE - Other	0.00	735,000.00	0.0%
<b>Total 10421.2 · MOORAGE</b>	<b>182,015.27</b>	<b>735,000.00</b>	<b>24.8%</b>
10422 · OTHER MARINA REVENUE	15,683.10		
<b>10423 · STORAGE</b>			
10423.1 · Gear Storage	19,999.19		
10423.2 · Boat Storage	12,555.24		
<b>Total 10423 · STORAGE</b>	<b>32,554.43</b>		
10424 · ADMINISTRATIVE FEES	3,427.86	0.00	100.0%
<b>10425 · MARINE SERVICES</b>			
10425.1 · Travelift	11,888.00	0.00	100.0%
10425.2 · 12 K Telehandler	2,605.40	0.00	100.0%
10425.3 · Other Sales & Fees	13,830.40		
10425 · MARINE SERVICES - Other	0.00	0.00	0.0%
<b>Total 10425 · MARINE SERVICES</b>	<b>28,323.80</b>	<b>0.00</b>	<b>100.0%</b>
10426 · PROPERTY GROUND EVENT USE	3,806.00		
<b>Total 10421 · MARINA</b>	<b>265,810.46</b>	<b>735,000.00</b>	<b>36.2%</b>
<b>10427 · BEACHFRONT RV PARK</b>			
10427.1 · Space Rental	223,779.42	750,000.00	29.8%
10427.2 · Other Sales & Fees	18,412.80	0.00	100.0%
<b>Total 10427 · BEACHFRONT RV PARK</b>	<b>242,192.22</b>	<b>750,000.00</b>	<b>32.3%</b>
<b>10428 · COMMERCIAL RETAIL</b>			
10428.1 · Retail Property	114,657.82	0.00	100.0%
10428.2 · Docks	66,752.44	0.00	100.0%
10428.3 · CPI and Other Fees	5,900.32	0.00	100.0%
10428 · COMMERCIAL RETAIL - Other	0.00	566,280.00	0.0%
<b>Total 10428 · COMMERCIAL RETAIL</b>	<b>187,310.58</b>	<b>566,280.00</b>	<b>33.1%</b>
10429 · FUEL DOCK	317,294.20	770,000.00	41.2%
<b>Total 402 · GENERAL FUND PROGRAM REVENUES</b>	<b>1,012,607.46</b>	<b>2,821,280.00</b>	<b>35.9%</b>
<b>420 · USDA REVENUE BOND FUND</b>			
20411 · Cash Carry Over - USDA Revenue	102,351.92	102,380.00	100.0%
20414 · Interest Revenue Bond Fund	231.88	500.00	46.4%
20419 · Transfer to USDA Bond Fund	43,372.00	130,120.00	33.3%
<b>Total 420 · USDA REVENUE BOND FUND</b>	<b>145,955.80</b>	<b>233,000.00</b>	<b>62.6%</b>
<b>430 · DEBT SERVICE FUND REVENUE</b>			

21

**Port of Brookings Harbor**  
**Profit & Loss Budget Performance**  
**July through October 2021**

Cash Basis

	Jul - Oct 21	Budget	% of Budget
30411 · Cash Carry Over - Debt Service	22,758.51	27,420.00	83.0%
30414 · Interest Debt Service Fund	109.52	450.00	24.3%
30419 · Transfer to Debt Service Fund	136,954.84	423,485.00	32.3%
<b>Total 430 · DEBT SERVICE FUND REVENUE</b>	<b>159,822.87</b>	<b>451,355.00</b>	<b>35.4%</b>
<b>440 · CAPITAL PROJECTS FUND REVENUE</b>			
40411 · Cash Carry Over - Capt Proj	40,430.77	62,500.00	64.7%
40416 · Government Funding			
40416.3 · State Lottery Funding	0.00	0.00	0.0%
40416 · Government Funding - Other	0.00	2,000,000.00	0.0%
<b>Total 40416 · Government Funding</b>	<b>0.00</b>	<b>2,000,000.00</b>	<b>0.0%</b>
40419 · Transfer to Capital Project	0.00	0.00	0.0%
<b>Total 440 · CAPITAL PROJECTS FUND REVENUE</b>	<b>40,430.77</b>	<b>2,062,500.00</b>	<b>2.0%</b>
<b>450 · RESERVE FUND REVENUE</b>			
50411 · Cash Carry Over - Reserve Fund	186,938.63	186,575.00	100.2%
50414 · Interest Reserve Fund	356.28	1,200.00	29.7%
50419 · Transfer to Reserve Fund	10,280.00	34,000.00	30.2%
<b>Total 450 · RESERVE FUND REVENUE</b>	<b>197,574.91</b>	<b>221,775.00</b>	<b>89.1%</b>
<b>460 · DEBT SERV. RV PARK IMPROV. FUND</b>			
60411 · Cash Carry Over - OR FFC 2020	0.00	0.00	0.0%
60419 · Transfer OR FFC 2020 Debt Serv.	19,239.48	57,718.00	33.3%
<b>Total 460 · DEBT SERV. RV PARK IMPROV. FUND</b>	<b>19,239.48</b>	<b>57,718.00</b>	<b>33.3%</b>
<b>470 · PORT CONSTRUCTION FUND REVENUE</b>			
70411 · Cash Carry Over - Port Const.	569,448.67	575,000.00	99.0%
70414 · Interest Port Construction Fund	1,070.11	2,000.00	53.5%
70419 · Transfers to Port Const. Fund	0.00	100,000.00	0.0%
<b>Total 470 · PORT CONSTRUCTION FUND REVENUE</b>	<b>570,518.78</b>	<b>677,000.00</b>	<b>84.3%</b>
<b>Total 400 · REVENUES</b>	<b>2,718,965.61</b>	<b>7,237,128.00</b>	<b>37.6%</b>
<b>Total Income</b>	<b>2,718,965.61</b>	<b>7,237,128.00</b>	<b>37.6%</b>
<b>Gross Profit</b>	<b>2,718,965.61</b>	<b>7,237,128.00</b>	<b>37.6%</b>
<b>Expense</b>			
<b>600 · GENERAL FUND EXPENDITURES</b>			
10900 · Operating Transfers Out General	209,846.32	745,323.00	28.2%
<b>500 · PERSONNEL SERVICES</b>			
10501 · Port Manager	26,112.00	88,470.00	29.5%
10502 · Port Office Staff	30,532.08	132,000.00	23.1%
10503 · RV Park Office Staff	18,082.31	54,120.00	33.4%
10504 · Operations Staff	75,862.94	262,460.00	28.9%
10505 · Overtime	2,565.48	7,255.00	35.4%
10506 · Payroll Taxes/Costs/Benefits			
10506.1 · Paid Holidays	2,822.32	0.00	100.0%
10506.2 · Sick Leave Benefit	5,685.21	0.00	100.0%
10506.3 · Vacation & Vehicle Allowance	19,487.60	0.00	100.0%
10506.4 · Payroll Taxes	17,786.39	0.00	100.0%
10506.5 · SEP Retirement	14,948.29	0.00	100.0%
10506 · Payroll Taxes/Costs/Benefits - Other	0.00	153,680.00	0.0%
<b>Total 10506 · Payroll Taxes/Costs/Benefits</b>	<b>60,729.81</b>	<b>153,680.00</b>	<b>39.5%</b>
10507 · Workers Compensation	14,548.35	11,810.00	123.2%
10508 · Health Care and Dental	32,035.20	86,500.00	37.0%
<b>Total 500 · PERSONNEL SERVICES</b>	<b>260,468.17</b>	<b>796,295.00</b>	<b>32.7%</b>
<b>601 · GENERAL FUND Material &amp; Service</b>			
10601 · ADVERTISING & NOTIFICATIONS	3,075.23	8,680.00	35.4%
10602 · REPAIRS & MAINTENANCE			

**Port of Brookings Harbor**  
**Profit & Loss Budget Performance**  
**July through October 2021**

Cash Basis

	Jul - Oct 21	Budget	% of Budget
10602.1 · Equip. Repair/Maintenance	11,993.76	0.00	100.0%
10602.2 · Supplies	67,980.84	0.00	100.0%
10602.3 · Services	46,240.22	0.00	100.0%
10602 · REPAIRS & MAINTENANCE - Other	0.00	452,797.00	0.0%
<b>Total 10602 · REPAIRS &amp; MAINTENANCE</b>	<b>126,214.82</b>	<b>452,797.00</b>	<b>27.9%</b>
10603 · FUEL purchased for resale	266,858.71	725,000.00	36.8%
10605 · UTILITIES			
10605.1 · Electric	32,882.77	0.00	100.0%
10605.2 · RV Park Cable TV	2,332.64	0.00	100.0%
10605.3 · Sanitary	21,451.18	0.00	100.0%
10605.5 · Telecommunications	4,115.82	0.00	100.0%
10605.6 · Waste Removal	47,280.48	0.00	100.0%
10605.7 · Water	8,771.10	0.00	100.0%
10605 · UTILITIES - Other	0.00	279,173.00	0.0%
<b>Total 10605 · UTILITIES</b>	<b>116,833.99</b>	<b>279,173.00</b>	<b>41.9%</b>
10606 · OFFICE EXPENSE	26,824.72	52,827.00	50.8%
10607 · BANK SERVICE & FINANCE FEES	21,493.33	40,482.00	53.1%
10608 · TRAINING & TRAVEL	4,368.57	4,486.00	97.4%
10609 · PERMITS, LICENSES, TAXES & MISC	3,176.65	13,000.00	24.4%
10610 · INSURANCE; PROP & CAS, BOND	39,254.94	95,292.00	41.2%
10611 · PROFESSIONAL FEES			
10611.1 · Accounting/Auditing	2,000.00	0.00	100.0%
10611.2 · Attorney	6,272.00	0.00	100.0%
10611.3 · Engineering	6,540.77	0.00	100.0%
10611.4 · Other Support/Consultant	5,776.40	0.00	100.0%
70611 · Engineer/Consultants/Port Const	10,425.65	0.00	0.0%
10611 · PROFESSIONAL FEES - Other	0.00	95,425.00	0.0%
<b>Total 10611 · PROFESSIONAL FEES</b>	<b>31,014.82</b>	<b>95,425.00</b>	<b>32.5%</b>
<b>Total 601 · GENERAL FUND Material &amp; Service</b>	<b>639,115.78</b>	<b>1,767,162.00</b>	<b>36.2%</b>
710 · GENERAL FUND CAPITAL OUTLAY			
10702 · Land Improvements	13,309.90	15,000.00	88.7%
10703 · Buildings	0.00	50,000.00	0.0%
10704 · Equipment	30,102.88	90,000.00	33.4%
<b>Total 710 · GENERAL FUND CAPITAL OUTLAY</b>	<b>43,412.78</b>	<b>155,000.00</b>	<b>28.0%</b>
920 · OPERATING CONTINGENCY	0.00	20,000.00	0.0%
600 · GENERAL FUND EXPENDITURES - Other	70.56		
<b>Total 600 · GENERAL FUND EXPENDITURES</b>	<b>1,152,913.61</b>	<b>3,483,780.00</b>	<b>33.1%</b>
620 · USDA REVENUE BOND EXPENDITURES			
20801P · USDA Revenue Bond Principal	0.00	79,917.00	0.0%
20810I · USDA Revenue Bond Interest	0.00	50,203.00	0.0%
<b>Total 620 · USDA REVENUE BOND EXPENDITURES</b>	<b>0.00</b>	<b>130,120.00</b>	<b>0.0%</b>
630 · DEBT SERVICE FUND EXPENDITURES			
30802P · IFA PRINCIPAL			
30802.1 · OBDD #520139/Boardwalk Prin	3,793.46	0.00	100.0%
30802.2 · OBDD #525172/RV Park Prin.	3,420.92	0.00	100.0%
30802.3 · OBDD #525176/Green Bldg Prn	6,024.09	0.00	100.0%
30802.4 · OBDD #525181/EurekaFish Prn	3,912.98	0.00	100.0%
30802.5 · SPWF #L02009/Cold Strg Prin	19,084.86	0.00	100.0%
30802.7 · SPWF L98004/Dock Impr Prin	0.00	0.00	0.0%
30802.8 · SPWF L02001/MarineFuel Dock Prn	45,698.76	0.00	100.0%
30802.9 · SPWF X03004/Eureka Fishery Prin	4,684.93	0.00	100.0%
30802P · IFA PRINCIPAL - Other	0.00	350,000.00	0.0%
<b>Total 30802P · IFA PRINCIPAL</b>	<b>86,620.00</b>	<b>350,000.00</b>	<b>24.7%</b>
801 · Principal			

**Port of Brookings Harbor**  
**Profit & Loss Budget Performance**  
**July through October 2021**

Cash Basis

	Jul - Oct 21	Budget	% of Budget
30803P · 50 BFMII Travelift Principal	16,492.57	50,447.00	32.7%
30804P · 2018 Genie Forklift Principal	4,722.63	14,469.00	32.6%
<b>Total 801 · Principal</b>	<b>21,215.20</b>	<b>64,916.00</b>	<b>32.7%</b>
<b>810 · Interest Payments</b>			
30813I · 50 BFMII Travelift Interest	2,143.43	5,461.00	39.2%
30814I · 2018 Genie Forklift Interest	1,136.21	3,108.00	36.6%
<b>Total 810 · Interest Payments</b>	<b>3,279.64</b>	<b>8,569.00</b>	<b>38.3%</b>
<b>Total 630 · DEBT SERVICE FUND EXPENDITURES</b>	<b>111,114.84</b>	<b>423,485.00</b>	<b>26.2%</b>
<b>640 · CAPT. PROJ. EXPENDITURES</b>			
40602 · Materials & Services Capt Proj	0.00	0.00	0.0%
<b>740 · CAPT. PROJ. CAPITAL OUTLAY</b>			
40702 · Land Improvement - Capt Proj			
40702.1 · Engineering/Consultants	19,830.00	0.00	100.0%
40702.2 · Supplies	922.58	0.00	100.0%
40702.3 · Services	380.00		
40702 · Land Improvement - Capt Proj - Other	0.00	2,060,000.00	0.0%
<b>Total 40702 · Land Improvement - Capt Proj</b>	<b>21,132.58</b>	<b>2,060,000.00</b>	<b>1.0%</b>
<b>Total 740 · CAPT. PROJ. CAPITAL OUTLAY</b>	<b>21,132.58</b>	<b>2,060,000.00</b>	<b>1.0%</b>
<b>Total 640 · CAPT. PROJ. EXPENDITURES</b>	<b>21,132.58</b>	<b>2,060,000.00</b>	<b>1.0%</b>
<b>660 · DEBT SERV. RV PARK EXPENDITURES</b>			
60806P · RV Park Improv. Loan Principal	12,791.03	38,751.00	33.0%
60815I · RV Park Improv. Loan Interest	6,448.45	18,967.00	34.0%
<b>Total 660 · DEBT SERV. RV PARK EXPENDITURES</b>	<b>19,239.48</b>	<b>57,718.00</b>	<b>33.3%</b>
<b>670 · PORT CONST FUND EXPENDITURES</b>			
<b>70100 · PORT CONST. CAPITAL OUTLAY</b>			
70700 · Land Improvement - Port Const.			
70701.1 · Supplies	5,035.26		
70700 · Land Improvement - Port Const. - Other	0.00	677,000.00	0.0%
<b>Total 70700 · Land Improvement - Port Const.</b>	<b>5,035.26</b>	<b>677,000.00</b>	<b>0.7%</b>
<b>Total 70100 · PORT CONST. CAPITAL OUTLAY</b>	<b>5,035.26</b>	<b>677,000.00</b>	<b>0.7%</b>
<b>Total 670 · PORT CONST FUND EXPENDITURES</b>	<b>5,035.26</b>	<b>677,000.00</b>	<b>0.7%</b>
<b>930 · Fund Balances</b>			
10930 · Unappropriated Balance GF	0.00	50,000.00	0.0%
20930 · Unappropriated Balance-USDA	0.00	102,880.00	0.0%
30930 · Unappropriated Balance Debt	0.00	27,870.00	0.0%
40930 · Unappropriated Balance Capt Pro	0.00	2,500.00	0.0%
50930 · Unappropriated Balance Reserve	0.00	221,775.00	0.0%
<b>Total 930 · Fund Balances</b>	<b>0.00</b>	<b>405,025.00</b>	<b>0.0%</b>
<b>Total Expense</b>	<b>1,309,435.77</b>	<b>7,237,128.00</b>	<b>18.1%</b>
<b>Net Income</b>	<b>1,409,529.84</b>	<b>0.00</b>	<b>100.0%</b>



Port of Brookings Harbor

Check Registers

As of October 31, 2021

Cash Basis

Type	Num	Date	Name	Memo	Debit	Credit
<b>100 · UNRESTRICTED CASH &amp; EQUIVALENTS</b>						
<b>101 · GENERAL FUND CHECKING &amp; LGIP</b>						
<b>10103 · General Funds Ckg Umpqua 3634</b>						
Bill Pmt -Check	Debit	10/19/2021	Chevron Business Card	Account #: 0496007075666 Fuel Purchases for Port Vehicles/Equipment - Confirmation# 363410192021		434.72
Bill Pmt -Check	DEBIT	10/05/2021	Tyree Oil, Inc	Account # 56851 Fuel Purchase for Resale		27,370.61
Bill Pmt -Check	DEBIT	10/05/2021	US Bank Equipment Finance	Contract No. 500-0623925-000 RICOH IMC8000 Copier		223.20
Check	DEBIT	10/01/2021	ADP	Advice of Debit #589129749 ezLaborManager/ADP 300 Timeclock (3 Timeclocks)		187.35
Check	DEBIT	10/01/2021	ADP	Advice of Debit 588947481 Payroll Date: 09/22/2021		142.71
Check	DEBIT	10/06/2021	Edward Jones	Employer Contribution 10/06/2021 ConfirmationS0MNW-DBMPC		135.19
Check	DEBIT	10/06/2021	Edward Jones	Employer Contribution 10/06/2021 ConfirmationS0MNW-D9YDZ		239.82
Check	DEBIT	10/06/2021	Edward Jones	Employer Contribution 10/22/2021 ConfirmationS0MNW-DB3NB		150.97
Check	DEBIT	10/06/2021	Edward Jones	Employer Contribution 10/06/2021 ConfirmationS0MNW-DB7WL		148.65
Check	DEBIT	10/06/2021	Edward Jones	Employer Contribution 10/06/2021 ConfirmationS0MNW-DBDM8		32.58
Check	DEBIT	10/06/2021	Edward Jones	Employer Contribution 10/06/2021 ConfirmationS0MNW-DBHDP		135.54
Check	DEBIT	10/06/2021	Edward Jones	Employer Contribution 10/06/2021 ConfirmationS0MNW-DBLGT		640.80
Check	DEBIT	10/06/2021	TD Ameritrade	Employer Contribution 10/06/2021 ConfirmationS0MNW-DBPDH		182.61
Check	DEBIT	10/06/2021	US Bank Sep- IRA	Employer Contribution 10/06/2021 ConfirmationS0MNW-DBTY6		340.25
Bill Pmt -Check	DEBIT	10/04/2021	Intuit	8744861 - Quickbooks Support 9/21-9/22		1,499.99
Bill Pmt -Check	DEBIT	10/05/2021	DMV2U/Dept. of Transportation	Vehicle Record Fees for 3 Inquiries PO2575 for 2 & PO 2577 for 1		12.00
Bill Pmt -Check	DEBIT	10/20/2021	Tyree Oil, inc	Account # 56851 Fuel Purchase for Resale		28,363.67
Sales Tax Pay...	DEBIT	10/08/2021	Oregon Lodging Tax	BIN: 0294055-3 CONFIRMATION# 1-501-100-800 3rd QTR 2021 TLT		6,090.73
Check	DEBIT	10/04/2021	Elavon	SEP 2021 MERCHANT SERVICE FEE ACCT#316		874.80
Check	DEBIT	10/04/2021	Elavon	SEP 2021 MERCHANT SERVICE FEE ACCT#873 Ventek Boat Launch		212.04
Check	DEBIT	10/04/2021	Elavon	SEP 2021 MERCHANT SERVICE FEE ACCT#951		1,499.34
Check	DEBIT	10/15/2021	ADP	Advice of Debit 589698737 Payroll Date: 10/06/2021		147.38
Check	DEBIT	10/20/2021	Edward Jones	Employer Contribution 10/20/2021 ConfirmationS21KM-VRNQ4		140.29
Check	DEBIT	10/20/2021	Edward Jones	Employer Contribution 10/20/2021 ConfirmationS21KM-VSV2R		236.65
Check	DEBIT	10/20/2021	Edward Jones	Employer Contribution 10/20/2021 ConfirmationS21KM-VT07B		146.86
Check	DEBIT	10/20/2021	Edward Jones	Employer Contribution 10/20/2021 ConfirmationS21KM-VT3FZ		148.65
Check	DEBIT	10/20/2021	Edward Jones	Employer Contribution 10/20/2021 ConfirmationS21KM-VT75B		172.39
Check	DEBIT	10/20/2021	Edward Jones	Employer Contribution 10/20/2021 ConfirmationS21KM-VTBR2		135.73
Check	DEBIT	10/20/2021	Edward Jones	Employer Contribution 10/20/2021 ConfirmationS21KM-VTFKT		303.68
Check	DEBIT	10/20/2021	TD Ameritrade	Employer Contribution 10/20/2021 ConfirmationS21KM-VTJWH		193.85
Check	DEBIT	10/20/2021	US Bank Sep- IRA	Employer Contribution 10/20/2021 ConfirmationS21KM-VTPDH		876.85
Check	DEBIT	10/20/2021		Miscellaneous Debit - Store Currency Deposited & Sold for SEP 2021		2.15
Check	DEBIT	10/29/2021	ADP	Advice of Debit 590704202 Payroll Date: 10/20/2021		147.38
Check	DEBIT	10/29/2021	ADP	Advice of Debit #591013181 ezLaborManager/ADP 300 Timeclock (3 Timeclocks)		187.35
General Journal	DEBT 10/01	10/01/2021		Transfer to Debt Service Fund for Travellift Payment		4,659.00
General Journal	DEBT 10/01	10/01/2021		Transfer to Debt Service Fund for Fork Lift Payment		1,464.71
General Journal	DEBT 10/01	10/01/2021		Transfer to Debt Serv. RV Park for Umpqua Bank Loan Acct#97748040835 Payment		4,809.87
General Journal	DF10/01	10/01/2021		General Fund Internal Transfer from Umpqua General Fund to Dredging Fund LGIP 6254 2% Gross Resou...		2,613.02
General Journal	IFA 10/01	10/01/2021		Transfer to IFA Debt Service for 4th QTR 2021 Pmt		25,835.00
General Journal	RES 10/01	10/01/2021		Transfer to Reserve Fund		2,000.00
General Journal	USDA 10/01	10/01/2021		To transfer to USDA Revenue Bond Fund for November 2021 Payment		10,843.00
General Journal	CPA 21-5	10/15/2021		Bank service charges for bounced check# 1078		15.00
General Journal	PAY 10/06	10/06/2021		Rec 10/06/2021 payroll		18,973.32
General Journal	TAX 10-06	10/06/2021		Rec 10/06/2021 payroll		7,209.71
General Journal	GF 10/8	10/08/2021		Transfer \$80,000 from LGIP to Umpqua Bank - General Funds	80,000.00	
General Journal	PAY 10/20	10/20/2021		Rec 10/20/2021 payroll		21,424.56
General Journal	TAX 10/20	10/20/2021		Rec 10/20/2021 payroll		8,727.27
General Journal	GF 10/29	10/29/2021		Transfer \$100,000 from LGIP to Umpqua Bank - General Funds	100,000.00	
General Journal	NSF #1078	10/15/2021	Mountain View Custom Cycles	Bounced Check# 1078		800.00
Bill Pmt -Check	10620	10/01/2021	Harbor Sanitary District	SEPTEMBER 2021 Sanitary Bill		5,850.66
Bill Pmt -Check	10622	10/08/2021	5-R Excavation, LLC	CCB: 155657 - 10/5/2021-Emergency Fuel Spill Clean at Gear Storage		1,934.00
Bill Pmt -Check	10623	10/08/2021	Coos-Curry Electric Cooperativ...	ACCT # 67601 Electrical Service FINAL BILL Acct#67601014 Coos-Curry Elec Coop Removal of Elec Me...		56.51
Bill Pmt -Check	10624	10/08/2021	Country Media, Inc.	CUST# 38747 Curry Coastal Pilot Notices		160.20

25

Port of Brookings Harbor

Check Registers

As of October 31, 2021

Cash Basis

Type	Num	Date	Name	Memo	Debit	Credit
Bill Pmt -Check	10625	10/08/2021	Freeman Rock, Inc.	Landscaping Rock for Commercial Retail / Shop Lot		2,320.76
Bill Pmt -Check	10626	10/08/2021	Gowman Electric, Inc.	CCB: 198999 Electrical Repair		105.88
Bill Pmt -Check	10627	10/08/2021	Harbor Logging Supply, Inc.	PO#2297 Misc. Metal for Repairs		224.40
Bill Pmt -Check	10628	10/08/2021	Harbor Water District P.U.D.	08/19/2021 - 09/28/2021 SERVICE/WATER BILL		2,400.32
Bill Pmt -Check	10629	10/08/2021	John Kellum/John's Portable ...	PO#2296 Johns Portable Welding Ramps & Camera Stands		262.50
Bill Pmt -Check	10630	10/08/2021	Oregon Alarm	VOID: Installation of 20 Security Cameras throughout Port	0.00	
Bill Pmt -Check	10631	10/08/2021	Spec Dist Assoc of OR- Prop ...	Policy#31P16414-203 Customer ID: 01-16414 - 2021 PROPERTY & CASUALTY POLICY		9,216.36
Bill Pmt -Check	10632	10/08/2021	ULine	Customer No. 15340135 OIL SORBENT BOOMS		397.16
Check	10633	10/08/2021	Nelda Williams	VOID: Roy C. Davis Memorial Fund - Nelda, Roy's mother did not want the remaining fund	0.00	
Sales Tax Pay...	10634	10/14/2021	Curry County TLT	Curry County Lodging Tax - 3rd QTR Lodging Tax Remittance		23,575.98
Bill Pmt -Check	10635	10/14/2021	BI-MART	Account #931481 Water & Supplies		24.98
Bill Pmt -Check	10636	10/14/2021	Fastenal Industrial Supplies	Customer No. ORBRK0013 Toiletries & Supplies		121.43
Bill Pmt -Check	10637	10/14/2021	Orcal Security Consulting LLC	Security for AUG & SEP 2021		5,580.00
Bill Pmt -Check	10638	10/14/2021	Oregon Alarm	Port Security System		17,430.00
Bill Pmt -Check	10639	10/14/2021	Spec Dist Assoc of OR- Health...	Customer #: 03-0016414 - HEALTHCARE PREMIUM		9,422.72
Bill Pmt -Check	10640	10/14/2021	SPECIAL DISTRICTS ASSC ...	2022 Annual Dues SDAO & OPPA		10,411.28
Bill Pmt -Check	10641	10/14/2021	The Roofers, LLC	CCB: 215757 Remaining due -Blue Fin Bldg Roof		3,900.00
Bill Pmt -Check	10642	10/14/2021	Thermo Fluids, Inc.	09/23/2021 Used Oil Pick Up from Generator, Derelict Boats		100.00
Bill Pmt -Check	10643	10/22/2021	Black & Rice LLP	SEP 2021 Legal Services		865.00
Bill Pmt -Check	10644	10/22/2021	Overton Safety Training, Inc.	10/12/2021 - Overhead Crane & Rigging Operator Qualification and Train the Trainer Qualification		3,770.00
Bill Pmt -Check	10645	10/22/2021	Platt	Customer Acct#127691 Electrical Supplies		410.00
Bill Pmt -Check	10646	10/22/2021	Tank Testers, LLC	10/12/2021 - Repair leak -Fuel Tank #4		905.50
Bill Pmt -Check	10647	10/22/2021	Travel Information Council	PO2678 State of Oregon Travel Info Council Beachfront RV HWY 101 SIGNAGE		384.00
Bill Pmt -Check	10648	10/22/2021	Quill Corporation	ACCT#1932158 Office Supplies		344.63
Check	10649	10/29/2021	TR Fine Arts LLC	REFUND - Due to Cancellation		50.00
Bill Pmt -Check	10650	10/29/2021	BI-MART	Account #931481 Water & Supplies		34.40
Bill Pmt -Check	10651	10/29/2021	Crescent ACE Hardware	Account #1842 -OCT 1 Bobcat Rental		1,061.88
Bill Pmt -Check	10652	10/29/2021	Curry Equipment	Account#1052 Equip Repair & Maint. Supplies		48.49
Bill Pmt -Check	10653	10/29/2021	Curry Transfer & Recycling	Account #2040-2434-001 Trash Dumpsters		10,124.63
Bill Pmt -Check	10654	10/29/2021	Del-Cur Supply Co-op	Customer No. 38700 Hardware & Other Supplies		20.12
Bill Pmt -Check	10655	10/29/2021	EMC-Engineers/Scientists, LLC	16.5 Hrs. Engineering- General Fund Projects		1,650.00
Bill Pmt -Check	10656	10/29/2021	Englund Marine Supply	Bilge Pump and Float Switch		151.67
Bill Pmt -Check	10657	10/29/2021	Gold Beach Lumber Yard, Inc.	Account #776 Hardware Supplies & Materials		990.14
Bill Pmt -Check	10658	10/29/2021	Kendrick Equipment USA LLC	EQ#4605 50T Marine Travel Lift - Maintenance Parts		329.02
Bill Pmt -Check	10659	10/29/2021	NAPA Auto Part	ACCT#60285 Vehicle/Equip Maint. & Supplies		7.13
Bill Pmt -Check	10660	10/29/2021	Pape Material Handling	Customer No. 1070715 Equipment Maintenance & Repair		1,191.28
Bill Pmt -Check	10661	10/29/2021	Rogue Credit Union	Membership #306 Acct#600189521 CC Ending#7681		4,643.83
Bill Pmt -Check	10662	10/29/2021	Roto Rooter	Acct#2940-522445 Sanitary Billing Period		455.05
Bill Pmt -Check	10663	10/29/2021	Thermo Fluids, Inc.	10/5/2021 Thermo Fluids Oily Water Service Removal		363.00
Bill Pmt -Check	10664	10/29/2021	Traffic Safety Supply Co.	Customer ID:C004722 One Way Sign Indicate Right Arrow		48.00
Bill Pmt -Check	10665	10/29/2021	ULine	Customer No. 15340135 OIL SORBENT BOOMS		397.29
Bill Pmt -Check	10666	10/29/2021	Umpqua Valley Fire Services, L...	10/06/2021-Fire Extinguisher Inspection & Service		1,564.87
Bill Pmt -Check	10667	10/29/2021	Coos-Curry Electric Cooperativ...	ACCT # 67601 Electrical Service		8,112.94
Total 10103 - General Funds Ckg Umpqua 3634					180,000.00	312,749.25
<b>10106 - General Fund LGIP 6017</b>						
Check	DEBIT	10/01/2021		LGIP Fees for SEP 2021		0.65
General Journal	GF 10/8	10/08/2021		Transfer \$80,000 from LGIP to Umpqua Bank - General Funds		80,000.00
General Journal	GF 10/29	10/29/2021		Transfer \$100,000 from LGIP to Umpqua Bank - General Funds		100,000.00
Total 10106 - General Fund LGIP 6017					0.00	180,000.65
Total 101 - GENERAL FUND CHECKING & LGIP					180,000.00	492,749.90

26

Port of Brookings Harbor  
Check Registers  
As of October 31, 2021

Cash Basis

Type	Num	Date	Name	Memo	Debit	Credit
<b>10101 · Petty Cash</b>						
Total 10101 · Petty Cash						
<b>Total 100 · UNRESTRICTED CASH &amp; EQUIVALENTS</b>					<b>180,000.00</b>	<b>492,749.90</b>
<b>110 · RESTRICTED CASH &amp; EQUIVALENTS</b>						
<b>104 · RESTRICTED MONEY MKT &amp; CHECKING</b>						
<b>20104 · USDA BOND Umpqua MM 9529</b>						
Total 20104 · USDA BOND Umpqua MM 9529						
<b>30104 · Debt Service Umpqua MM 8627</b>						
Check	DEBIT	10/15/2021	Umpqua Bank/Loan#747041620	Genie Reach Forklift Loan#747041620 Payment #44		1,464.71
Check	DEBIT	10/22/2021	m2 Lease LLC	Customer #107104 Loan#110561 Prnt #60 - 50 BFMII Travelift		4,659.00
General Journal	DEBT	10/01	10/01/2021	Transfer to Debt Service Fund for Travelift Payment	4,659.00	
General Journal	DEBT	10/01	10/01/2021	Transfer to Debt Service Fund for Fork Lift Payment	1,464.71	
Total 30104 · Debt Service Umpqua MM 8627					<b>6,123.71</b>	<b>6,123.71</b>
40104 · Capital Projects Umpqua 8018						
<b>Total 104 · RESTRICTED MONEY MKT &amp; CHECKING</b>					<b>6,123.71</b>	<b>6,123.71</b>
<b>105 · RESTRICTED LGIP</b>						
<b>20105 · USDA Bond Fund LGIP 6021</b>						
General Journal	USDA	10/01	10/01/2021	To transfer to USDA Revenue Bond Fund for November 2021 Payment	10,843.00	
Total 20105 · USDA Bond Fund LGIP 6021					10,843.00	0.00
<b>30105 · IFA Debt Service Fund LGIP 6020</b>						
General Journal	IFA	10/01	10/01/2021	Transfer to IFA Debt Service for 4th QTR 2021 Prnt	25,835.00	
Total 30105 · IFA Debt Service Fund LGIP 6020					25,835.00	0.00
<b>50105 · Reserve Fund LGIP 6018</b>						
General Journal	RES	10/01	10/01/2021	Transfer to Reserve Fund	2,000.00	
Total 50105 · Reserve Fund LGIP 6018					2,000.00	0.00
<b>Total 105 · RESTRICTED LGIP</b>					<b>38,678.00</b>	<b>0.00</b>
<b>Total 110 · RESTRICTED CASH &amp; EQUIVALENTS</b>					<b>44,801.71</b>	<b>6,123.71</b>
<b>TOTAL</b>					<b>224,801.71</b>	<b>498,873.61</b>

**Port of Brookings Harbor**  
**Purchases by Vendor Summary**  
 January through October 2021

Cash Basis

	<u>Jan - Oct 21</u>
101 Things To Do	1,320.00
5-R Excavation, LLC	11,227.16
Absolute Golf Carts	650.00
Adobe	119.92
ADP	5,318.53
Alexandre EcoDairy Farms	875.00
AMAZON MKTPLACE	5,973.30
Anchor Lock & Key	2,808.65
Anchorside Printing	78.25
Aquarius Environmental, LLC	1,480.77
Armoillo Display Solutions	273.46
Association of Pacific Ports	1,660.00
Asurion Wireless Insurance	19.00
Best Buy	2,039.95
BI-MART	828.79
Black & Rice LLP	12,061.00
BOARDWALK MAIL SERVICE	183.21
Boat Launch Kiosk	21.00
Boat Shop & More LLC	10,190.50
BOLI PWR	1,000.00
BoomTech	77.47
Bronze Memorials Inc.	1,582.48
Brookings Harbor Chamber of Commerce	450.00
Brookings Signs & Graphics	117.00
Bullet Rental	2,725.08
C.O. Construction	535.00
CAL/OR Insurance Specialists, Inc.	2,389.50
CED	379.50
CertifiedMailLabels.com	800.00
Chetco Automotive	10.78
CHEVRON	1,279.10
Chevron Business Card	4,594.04
City of Brookings	2,812.50
Coastal Audio & Tint	300.00
Cole-Parmer	156.51
Coos-Curry Electric Cooperative, Inc.	87,466.17
Country Media, Inc.	3,232.31
Crescent ACE Hardware	2,973.26
Crow/Clay & Associates, Inc	13,019.40
Crown Plumbing	10,833.14
Curry Coastal Pilot	78.00
Curry County Business License	102.50
Curry County Clerk	3,772.27
Curry County Community Development	4,720.40
Curry County Sheriff	125.00
Curry County Tax Collector	2,110.05
Curry Equipment	1,643.33
Curry Transfer & Recycling	70,629.58
Da-Tone Rock Products	2,831.95
Del-Cur Supply Co-op	3,903.13
Dish Network	5,760.19
DJC Oregon	502.04
DMV2U/Dept. of Transportation	82.00
Dollar Tree	1.00
DropBox	119.88
Elavon	12,661.64
EMC-Engineers/Scientists, LLC	80,360.00
Engineering Resource Services LLC	1,205.00

**Port of Brookings Harbor**  
**Purchases by Vendor Summary**  
 January through October 2021

Cash Basis

	<u>Jan - Oct 21</u>
Englund Marine Supply	1,294.05
Fastenal Industrial Supplies	17,893.22
Ferguson Enterprises, Inc.	21,605.69
Firefly Reservations	1,692.00
Fluid Manufacturing	874.09
Frank's Heating & Refrigeration	1,667.57
FRED MEYER	283.13
Freeman Rock, Inc.	5,467.63
Gerald W. Burns, CPA	4,500.00
GODaddy.com	239.88
Gold Beach Lumber Yard, Inc.	29,846.50
Gowman Electric, Inc.	15,307.93
Grainger	252.70
Grants Pass Water Lab, Inc.	3,240.00
Grating Pacific, LLC	1,941.00
GSS, Inc.	110.00
Harbor Corner Market LLC	29.18
Harbor Logging Supply, Inc.	9,270.79
Harbor Sanitary District	44,702.64
Harbor Truss and Supply LLC	330.00
Harbor View Windows, Heating & Air	1,500.75
Harbor Water District P.U.D.	19,114.02
Hartwick Automotive	267.92
HD SUPPLY FACILITIES	1,272.72
Heartsmart.com	546.11
Home Depot	3,615.54
Honeybee Bakery	43.75
Hot And Mighty	12,210.00
In-Motion Graphics and Design, LLC	462.00
Industrial Steel & Supply Co. Inc.	313.00
Interstate Plastics	450.00
Intuit	7,135.21
iSecure Information Security	621.50
Jacknob	121.20
JAM Paper & Envelope	198.31
John Kellum/John's Portable Welding	8,775.00
K&K Insurance Group, Inc.	225.00
Kaman Industrial Technologies	3,666.24
Kendrick Equipment USA LLC	5,348.81
Legacy Contracting, Inc.	469,975.59
Les Schwab Tire Center	45.99
M & J Glazebrook Construction	614.75
Marine Surveyors & Consultants	640.00
Mascott Equipment	2,441.18
Mc Court Floor Coverings, Inc	75.00
McLennan Excavation, Inc.	9,990.00
Microsoft	469.95
My Parking Permit	983.30
NAPA Auto Part	656.33
NorthCoast Health Screening	165.00
Northwest Parking Equipment Company	1,335.84
ONLINE Purchases	1,020.20
Orcal Security Consulting LLC	27,540.00
Oregon Alarm	60,120.00
Oregon Building Codes - Coos Bay Office	299.25
Oregon Coast Magazine	675.00
Oregon Department of Agriculture	278.00
Overton Safety Training, Inc.	3,770.00

**Port of Brookings Harbor**  
**Purchases by Vendor Summary**  
 January through October 2021

Cash Basis

	<u>Jan - Oct 21</u>
Pacific Office Automation	2,364.00
Pacific Rim Copy Center	449.40
Palm Industries, Inc.	2,479.99
Pape Material Handling	6,327.51
Paygov	25.00
Personnel Concepts	48.85
Pitney Bowes Global Lease	1,261.59
Pitney Bowes, Inc.	1,712.96
Platt	2,630.48
Port of Brookings Harbor	15.00
PPS Store	6,387.94
Pump Pipe & Tank Services, LLC	2,237.92
Quill Corporation	7,290.96
Rentprep Enterprise/Fidelis Screening	778.05
Roberts & Associates Land Surveying, Inc.	2,150.00
Rock Island Design	1,047.05
Rotary Club of Brookings-Harbor	250.00
Roto Rooter	455.05
See Water Inc.	159.00
Sensaphone	299.40
SimpliSafe	149.90
Slice Recovery	3,927.00
SmartSign	132.26
SO Backflow Techs	364.00
Spec Dist Assoc of OR- Workers Comp	14,548.35
Spec Dist Assoc of OR- Healthcare	84,123.92
Spec Dist Assoc of OR- Prop & Cas	92,163.60
Spec Dist Assoc of Or -TRAINING	450.00
SPECIAL DISTRICTS ASSC OR (annual dues)	10,411.28
Spectrum Business 8752 19 060 0025169	962.20
Spectrum Business 8752 19 060 0226494	951.22
Spectrum Business 8752 19 060 0247029	899.80
Spectrum Business 8752 19 060 0251369	774.70
Stadelman Electric, Inc.	4,892.66
Stericycle	98.05
Strahm's Sealcoat & Striping, Inc.	26,739.00
Suburban Propane	784.79
SUPPLYHOUSE.COM	534.20
Tank Testers, LLC	14,312.00
The Park Catalog	6,162.21
The Roofers, LLC	18,127.84
Thermo Fluids, Inc.	2,169.20
Tidewater Contractors, Inc.	6,938.00
Traffic Safety Supply Co.	7,880.33
Travel Information Council	732.00
Tyree Oil, Inc	434,010.75
U Printing	257.83
Uline	3,212.47
Umpqua Valley Fire Services, Inc.	1,564.87
US Bank Equipment Finance	2,232.00
US Postal Service	183.95
US Relay/HD Relay	634.00
Valvoline	342.73
Ventek International	2,070.00
VERIZON WIRELESS	3,242.34
Victra/ Verizon	689.96
VISTA PRINT	28.00
Vonage	2,288.24

**Port of Brookings Harbor**  
**Purchases by Vendor Summary**  
January through October 2021

Cash Basis

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	<u>Jan - Oct 21</u>
Walmart	28.59
Wayfair LLC	285.99
WebReserv	495.00
WEEBLY-CHARGE.COM	1,379.00
Wes' Towing	90.00
Whales Tail Candy and Gifts	70.56
Ziply Fiber 541-412-7930-102902-5	353.49
Ziply Fiber 541-469-5867-121516-5	765.72
Zoom Video Communications Inc.	149.90
<b>TOTAL</b>	<b><u><u>1,983,974.20</u></u></b>

# HARBORMASTER MONTHLY REPORT

**Date:** November 17, 2021  
**Period:** October 2021  
**To:** Gary Dehlinger, Port Manager  
**Issued By:** Travis Webster, Harbormaster

## RV Park

Due to low occupancy staff has focused on maintaining walkways and removing loose gravel in drive areas. Potholes are ongoing and are filled on a as needed basis. One breaker and outlet were replaced along with fence post and board replacement. Beach Bingo banner was placed at the entrance and gangways were removed for the winter months. Staff fixed broken main water line with the assistance of 5R Construction. Park water was down for about 4 hours.

## Occupancy Percent by Month & Year

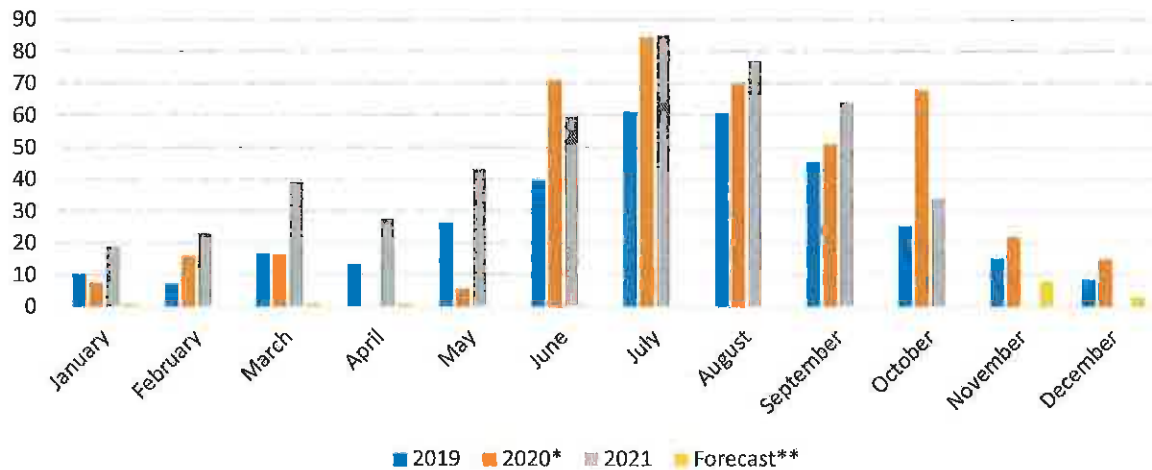
	2019	2020*	2021	Change from 2020	Forecast**
January	10.3	7.5	19	11.5	1
February	7.3	16	23	7	0
March	16.8	16.4	39	22.6	1
April	13.5	0	27.5	27.5	1
May	26.4	5.7	43.1	37.4	
June	39.9	71.1	59.5	(11.6)	
July	61.3	84.7	85	0.3	
August	60.8	70	77	7	
September	45.4	51	64	13	
October	25.4	68	34	(34)	
November	15.2	22			8
December	8.5	15			3

Average    **27.5**        **35.6**        **47.1**

\* April & most of May 2020 RV Park was closed due to COVID-19.

\*\* Forecast – Park allows for guests to reserve 6 months in advance.

## RV Park Occupancy





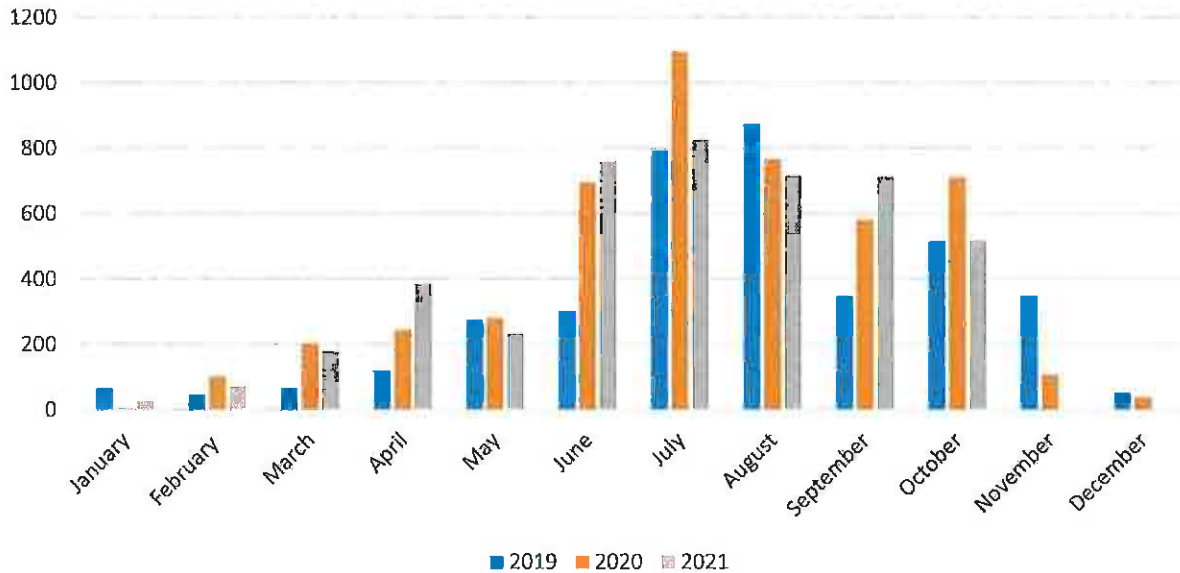
**Marina**

Staff has been walking docks daily to ensure boats moored are securely tied to docks. Staff encountered many vessels that have stretched or have broken ropes. If staff can re-tie boats on their walks they will do at no charge. Staff will also make calls to owners if their ropes are in question. If staff encounters a vessel with 1 or more mooring lines broke, staff has been directed to replace the rope at the expense of the vessel’s owner. Port sent out a letter to every moorage holder, (attached) informing them to check their mooring lines and cords. Per Port Ordinances every cord shall being marine approved.

**Boat Launches Paid through Launch Machine**

	2019	2020	2021	Change from 2020
January	66	5	27	22
February	47	102	70	(32)
March	66	204	178	(26)
April	122	244	386	142
May	276	282	233	(49)
June	303	697	759	62
July	794	1095	826	(269)
August	875	768	716	(52)
September	350	583	713	130
October	518	713	518	(195)
November	352	109		
December	53	40		
<b>Totals</b>	<b>3,822</b>	<b>4,842</b>	<b>4,426</b>	<b>-267</b>

**Boat Launches**



**Equipment Services Performed by Port Staff**

**Telehandler Jobs**

	2019	2020	2021
January	4	2	0
February	1	6	3
March	6	4	6
April	7	10	5
May	6	3	7
June	3	0	3
July	1	5	0
August	3	4	1
September	3	3	1
October	10	6	5
November	3	9	
December	15	5	
<b>Totals</b>	<b>62</b>	<b>57</b>	<b>31</b>

**Travel Lift Haul-Outs**

	2019	2020	2021
January	2	1	0
February	2	5	1
March	4	5	6
April	7	5	6
May	13	9	5
June	16	15	12
July	15	14	7
August	8	4	7
September	7	6	8
October	9	8	4
November	8	5	
December	5	1	
<b>Totals</b>	<b>96</b>	<b>78</b>	<b>56</b>

**Commercial Receiving Dock**

All receiving docks have been slow or no work. Fisherman are beginning gear work for the upcoming crab season. Port will receive a hoist inspection on November 1<sup>st</sup> and the public hoist will be back open and an agreement has been approved by commissioners.

**Commercial Retail Building**

Staff completed sewer inspections on all buildings that require pumps. New trash cans enclosures were installed along the boardwalk and retail areas. Tank 4 was cleaned at the fuel dock. This is the tank that was converted from gas to diesel.

**Maintenance Crew**

Maintenance completed 119 work orders throughout the port. Staff made multiple trips in workboat to remove debris from water and deposited into slips. Staff also removed debris from launch ramp to make a safer surface.



## Port of Brookings Harbor

16330 Lower Harbor Road / PO Box 848  
Brookings, Oregon 97415  
Phone (541) 469-2218  
Fax (541) 359-3999  
[www.portofbrookingsharbor.com](http://www.portofbrookingsharbor.com)

### Board of Commissioners

Richard Heap, President  
Joseph Speirs, Vice-President  
Sharon Hartung, Secretary/Treasurer  
Kenneth Range  
Larry Jonas

October 27, 2021

Dear Moorage Holders,

Early winter storms have shown the need to check your vessel tie lines, bumpers, electrical cords, and seaworthiness (specifically bilge pump). Recent rain and windstorms have already affected numerous vessels in our harbor. Please ensure your vessel is equipped and maintained. You are ultimately responsible for your vessels condition while in port.

Also, please check your bilge water for any oil. Oil discharge is prohibited. The Port will dispose of oily bilge water at the Port Shop located next to the Indian Memorial.

If you have any questions, please contact the Port of Brookings Harbor office at 541-469-2218 or me at 541-291-7380.

Sincerely,

TRAVIS WEBSTER

Travis Webster  
Harbormaster

# PORT MANAGER

## MONTHLY REPORT

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**Date:** November 17, 2021  
**Period:** October 2021  
**To:** Honorable Board President and District Board Members  
**Issued By:** Gary Dehlinger, Port Manager

---

Port completed the RV Park Improvement Project bidding process and awarded the contract to McLennan Excavation. Crow/Clay & Associates completed Amendment No. 4 delivering construction drawings and bidding process. Construction administration costs are billed separately.

Request for proposals process was completed for FEMA engineering services. EMC Engineers/Scientists was awarded the contract. The Joint Permit Application (JPA) has resumed. Core sampling is getting scheduled as soon as possible. Data from the sampling will be needed to complete the JPA. The JPA is needed to perform in-water work, such as dredging and slope repair work. Core sampling is also needed to complete FEMA scope of work approval.

Number of vessels coming off the ocean due to storms and from Coast Guard dropping off broken vessels have created some issues on the transient dock space. We are looking at ways to create more room on the main transient dock.

The annual financial audit report for last fiscal year is in full swing. Draft report and audit information was sent over to our financial consultant and CPA representative. We are anticipating the annual audit completed in before the December 31st deadline.

Annual review of SDAO insurance equipment and property list was completed. The main RV Park restroom was placed back on the list. Since Seal Cove Realty lease ended, the building became Port property and was added to the list. Hallmark dock and old Pacific Seafood dock were missing from the list and are now included. The RV Park office was listed under equipment instead of a building.

South Coast Knight Security have underperformed recently. There were couple of days without security staff showing up for patrol, few days with less than two-hour coverage, not ticketing vehicles that are parked overnight or camping, and lack of information on their daily logs. We have had multiple talks with South Coast Knight Security to improve their performance.

County Commissioner Court Boice stop by to introduce a financial specialist to look at possible private financial support on a wastewater treatment plant. We exchanged contact information and basic information on the Port and current plans for the plant. At this time, no further discussions have taken place.

Port received a resignation letter from Martha Rice/Port Legal Counsel. December 25, 2021 will be her last day representing the Port. I want to thank Martha for being our legal counsel for the last four years. More information regarding the search for a new general counsel service will be covered under Information Item C.

A Business Oregon pre-application for the matching funds on the FEMA disaster repairs was submitted. The full application for Board approval should happen sometime in November. Matching amount is just under \$1 million.

## 2021 Commissioner Meeting Review

#	Meeting Date	Action Item	Information Item	Commission Vote Approve / Fail / Hold	Notes
1	Tuesday, January 12, 2021		Delinquent Accounts		
2			Blue Fin Realty Lease		
3			DEQ Tier 1 Report		
4			FEMA Projects Update / Planning & Permitting, Phase I		
5			Icehouse Pile and Catwalk Repair Cost		
6			Garbage Reception Facilities at Ports Under MARPOL Annex V		
7			Fuel Dock Project		
8			2021 Events at the Port		
9			Keypad Locks on Restroom Facilities		
10			Port Infrastructure Status		
11			Port Holidays 2021 – 2025		
12			Coronavirus Relief Fund		
13			RV Park Project Update		
14			Financial Consultant Contract		
15			Commissioner Meetings Under COVID-19		
16			Sporthaven Beach Equipment Contribution		
17	Tuesday, January 19, 2021	Blue Fin Realty Lease		Approved	
18		Financial Consultant Contract		Approved	
19		Mike Smith Account		Approved	Reduce amount if paid by Jan 26
20		Corey Sample Account		Approved	Reduce amount if paid by Mar 31
21		Port Restroom Facilities		Approved	Install keypads when funds avail.
22	Wednesday, January 27, 2021	Resolution No. 2021-01 Port Signatures on PLA Deeds		Approved	Righetti Property Line Adjustment
23		Fuel Dock Fender Piles		Approved	Add piles at Hallmark & Icehouse
24	Thursday, February 4, 2021	Commissioner Roy Davis		Approved	Position # 3 vacant
25		Commissioner Roy Davis		Approved	Leave Position # 3 vacant
26		Fuel Dock Project		Approved	Eliminated concrete structure
27	Wednesday, February 10, 2021		DEQ Tier 1 Report		
28			FEMA Projects Update / Planning & Permitting, Phase I		
29			Fuel Dock Project		
30			2021 Events at the Port		
31			Coronavirus Relief Fund		
32			Righetti / Port Property Line Adjustment		
33			Business Credit Card		
34			Appoint Budget Officer FY 2021/22		
35			Roy Davis Memorial		
36			RV Park Project		
37	Tuesday, February 16, 2021	Appoint Budget Officer FY 2021/22		Approved	
38		2021 Port Events		Approved	Approved with additional conditions
39		RV Park Project		Hold	Request additional information
40		Business Credit Card		Approved	
41		Roy Davis Memorial		Approved	Start memorial fund
42			Special District Election		
43			RV Park Reservation Program		
44			Blue Fin Realty Lease		

**2021 Commissioner Meeting Review**

#	Meeting Date	Action Item	Information Item	Commission Vote Approve / Fail / Hold	Notes
45	Friday, February 26, 2021	RV Park Restroom Restoration		Approved	Restore old restroom
46		RV Park Project		Approved	Change Scope of Project
47		Eviction of Seal Cove Realty		Approved	Begin legal process
48			Potholes in Dry Camp		
49	Thursday, March 11, 2021		Hallmark Lease Renewal		
50			Audit Engagement Letter		
51			Budget Committee		
52			Pithitude and Harbor Corner Market Security Gate		
53			Whale's Tail Candy & Gifts Lessor's Consent Agreement		
54			DEQ Stormwater Tier 1 Report		
55			RV Park Exit Road		
56			Fishing Pier Sinkholes		
57			Boardwalk Condition Update		
58			Ocean Acidification, Salmon Study & Ropeless Fishing System		
59			Crow/Clay Associates Contract Amendment No. 4		
60			Business Oregon Commercial Rent Relief Program		
61			Abandon & Derelict Vessels		
62			Sheriff K-9 Training at Port		
63			Port Rates 2021-22		
64			Harbor Sanitary District Agreement		
65			Pacific Seafood		
66			FLOATING OFFSHORE WIND IN OREGON		
67	Tuesday, March 16, 2021	Hallmark Lease Renewal		Approved	
68		Audit Engagement Letter		Approved	
69		Appoint Budget Committee		Approved	
70		Pithitude and Harbor Corner Market Security Gate		Approved	
71		Whale's Tail Candy & Gifts Lessor's Consent Agreement		Approved	
72		Crow/Clay & Associates Contract Amendment No. 4		Approved	
73		Port Rates 2021-22		Approved	
74		Harbor Sanitary District Agreement		Approved	
75			Salmon Season Review		
76	Monday, March 29, 2021	Blue Fin Sign		Approved	
77		Zola's on the Water Construction Plan		Approved	
78			Sinkhole Repair at Fishing Pier		
79			Asphalt Repair at RV Park and Fishing Pier		
80			MARPOL Certificate of Adequacy Form C		
81		Seal Cove Realty Eviction			
82	Tuesday, April 6, 2021	Draft Resolution No. 2021-02 Business Oregon Commercial Rent Relief Program		Approved	
83		Draft Resolution No. 2021-03 Supporting Funding Efforts for a Wastewater Treatment Plant		Approved	
84		Draft Resolution No. 2021-04 Port Rates Fiscal Year 2021-22		Approved	
85		Port Employee SDIS Health Care Plan Application Renewal		Approved	
86			Roy Davis Memorial Fund Update		
87		Regular Commissioner Meeting April 20, 2021			
88		Special Meeting April 13, 2021 at 6pm			

**2021 Commissioner Meeting Review**

#	Meeting Date	Action Item	Information Item	Commission Vote Approve / Fail / Hold	Notes
89			Special Meeting April 29, 2021 at 2pm		
90	Thursday, April 29, 2021		FEMA Projects Planning & Permitting, Phase I Presentation to Board		
91		Pacific Seafood Consent to Assignment		Hold	Documents not ready
92		Pacific Seafood Restated Lease		Hold	Documents not ready
93		Legacy Contracting Change Order No. 2		Approved	
94		Spothaven Beach Equipment		Approved	
95		US Relay Contract - Bar Cam		Approved	
96			Roy Davis Memorial		
97			Travel Oregon Competitive Grant		
98			SDAO Call to Action		
99			Salmon Season Review		
100			Umpqua Joe Chapter 1859 Monument		
101			Hungry Clam Proposed Storage Plan		
102			Business Oregon Commercial Rent Relief Program		
103			Seal Cove Realty Eviction		
104			2022 Community Funding - Defazio Application		
105			Oregon DEQ Regulation Changes		
106			Fred Meyer Container Storage		
107			Public Hoist		
108			Curry County Potholing Storm Drain		
109			Catalyst Seafood Building Expansion		
110	Thursday, May 6, 2021	Pacific Seafood Consent and Restated Lease		Approved	
111		FEMA Projects Planning & Permitting, Phase I		Approved	Scope of Work
112		Collect Northwest Collection		Approved	
113	Tuesday, May 11, 2021	Review and approved FY2021-22 Budget		Approved	Budget Committee
114	Tuesday, May 18, 2021	ODFW Agreement of Confidentiality		Approved	
115		Oregon Life Homes Commercial Lease		Approved	
116		Delinquent Account Write Off		Approved	
117		OSMB IGA - Demo Abandon Boats		Approved	
118		Roy Davis Memorial		Approved	
119		The Roofers Change Order		Approved	
120			Pacific Seafood Receiving Docks		
121			USACE Channel Dredging 2021		
122			Travel Oregon Grant Application Status		
123			Business Oregon Commercial Rent Relief Program		
124			Emergency Response Team		
125	Thursday, June 10, 2021		Supplemental Budget FY 2020-21, Resolution Adopting the Budget		
126			Resolution to Adopt Fiscal Year Budget 2021-22		
127			Beachfront Dry Camping Area		
128			No Parking Zones		
129			E Clampus Vitus Plaques – Monument Placement on Port Property		
130			Hungry Clam Outdoor Storage Alteration		
131			Crow/Clay RV Park Draft Construction Drawings		
132			Joint Permit Applicant – FEMA DR-4432 & DR-4452 Projects		

**2021 Commissioner Meeting Review**

#	Meeting Date	Action Item	Information Item	Commission Vote Approve / Fail / Hold	Notes
133			FEMA DR-4432 & DR-4452 Scope of Work		
134			Moss in Slips		
135			Brookings-Harbor Chamber of Commerce Membership Renewal		
136			Becky Hannen Payment Relief Request		
137			Transient Dock Electrical Building		
138			USACE Maintenance Dredging FY-22 Budget Request		
139			IT Security Policy		
140			Aboveground Fuel Tank Capacity Change		
141			Repair, Maintenance & Capital Projects Planning		
142			Security Camera Proposal		
143			Crown Plumbing Change Order		
144			Delinquent Account Receivable Write Off		
145			May 2021 Financial Report		
146	Tuesday, June 15, 2021	Supplemental Budget Hearing - FY 2020-21		Approved	
147	Tuesday, June 15, 2021	Budget Hearing - FY 2021-22		Approved	
148	Tuesday, June 15, 2021	Supplemental Budget FY 2020-21, Resolution Adopting the Budget		Approved	
149		Resolution to Adopt Fiscal Year Budget 2021-22		Approved	
150		Beachfront Dry Camping Area		Approved	Install blocks for separation
151		No Parking Zones		Approved	Install signs, paint curbs, etc.
152		E Clampus Vitus Plaques – Monument Placement on Port Property		Approved	Placement along beach walkway
153		Hungry Clam Outdoor Storage Alteration		Approved	
154		Crow/Clay RV Park Draft Construction Drawings		Approved	
155		Brookings-Harbor Chamber of Commerce Membership Renewal		Approved	
156		IT Security Policy		Approved	
157		Aboveground Fuel Tank Capacity Change		Approved	
158		Crown Plumbing Change Order		Approved	
159		Delinquent Account Receivable Write Off		Approved	All accounts going to collections
160	Thursday, July 15, 2021		Best Management Practices Policy Update		
161			Beachfront RV Park Rules & Information Update		
162			Catalyst Seafood Building Addition		
163			Port Security Contract		
164			Boat Launch Parking Lot Signage		
165			Traffic & Parking at Zola's on the Water		
166			Fire Hydrant at Basin 2 Commercial Parking Lot		
167			Joint Permit Application Update		
168			Catalyst Seafood Event		
169			Roy Davis Memorial Bench Location		
170			Delinquent Account Write Off Request		
171			Curry County Land Use Application – RV Park Project		
172			J Sloane Request for Air Conditioning		
173			Accessible Parking Spaces		
174			Blue Fin Lease Building Roof and Rot Repair		
175			SDAO Board of Directors and Management Staff Training		
176			Wastewater Treatment Plant Funding Update		



2021 Commissioner Meeting Review

#	Meeting Date	Action Item	Information Item	Commission Vote Approve / Fail / Hold	Notes
177	Tuesday, July 20, 2021	Resolution 2021-07 Adopting IT Security Policy		Approved	
178		Best Management Practices Policy Update		Approved	
179		Beachfront RV Park Policy Update		Approved	
180		Catalyst Seafood Building Addition		Approved	
181		Authorized Bank Signatures		Approved	
182		Boat Launch Parking Signage		Approved	
183		Traffic & Parking at Zola's on the Water		Hold	
184		Fire Hydrant at Basin 2 Commercial Parking Lot		Approved	
185		Roy Davis Memorial Bench Location		Approved	
186		Delinquent Account Write Off Request		Approved	
187		Curry County Land Use Application – RV Park Project		Approved	
188		Whale's Tail Candy & Gifts/Becky Hannen Collections Settlement Offer		Approved	Board did not accpet offer
189		CBN Visitor Center/Barbara Ciaramella Collections Decision		Approved	Accept payment and continue with collections
190	Tuesday, August 3, 2021	Sea Otter Coalition Letter		Approved	
191	Tuesday, August 17, 2021	Rotary Beach Bingo Cleanup		Approved	
192		Resolution 2021-08 Best Management Practices Policy		Approved	
193		Bounder Fresh Crab Lease Renewal		Approved	
194		Pithitude Lease Renewal		Approved	
195		Aboveground Fuel Tank Pollution Insurance Renewal		Approved	
196		Gear Storage / Boat Storage Relocation		Approved	
197		Heat Illness Prevention Plan		Approved	
198		Congressman DeFazio Visit to the Port		Approved	
199		Regular Meetings of the Commission Change		Approved	
200			Coos Curry Electric Service Repairs		
201			Zola's on the Water Traffic and Parking Plan		
202			Pacific Seafood Housing on Port Property Request		
203			Wastewater Treatment Plant Funding		
204	Tuesday, September 21, 2021	Resolution 2021-09 Regular Meetings of the Commission		Approved	
205		Authorizing Port Manager to Sign Renewal Documents		Approved	Resolution 2021-10
206		Contract Approval for New Fire Hydrant		Approved	McLennan Excavation
207		Contract Approval for Port Security		Approved	South Coast Knight Security
208		Contract Approval for Port Engineering		Approved	EMC Engineering / Scientists
209		Rogue Credit Union Lease Renewal		Approved	
210		Boatyard Wash Water System Procurement		Approved	
211		Port Security Cameras Quote		Approved	
212		Zola's on the Water Parking & Traffic Plan		Approved	One-way traffic and repairs
213		Public Dock Hoist Waiver Form		Approved	\$35 for Eq per hour / \$0.05 per lb. fish
214		Donating Digital Fish Scales		Approved	
215			Request For Proposals, FEMA 4432 and Wastewater Treatment Plant Engineering		
216			Wastewater Treatment Plant Information		EMC provided general info.
217			Roy Davis Memorial Dedication		
218	Thursday, October 7, 2021	RV Park Improvements Bid Award		Approved	
219	Wednesday, October 20, 2021	Resolution 2021-11 Adopting Public Dock Hoist Rates and Use Agreement		Approved	
220		Port Vehicles Procurement Approval		Approved	

## 2021 Commissioner Meeting Review

#	Meeting Date	Action Item	Information Item	Commission Vote Approve / Fail / Hold	Notes
221		Port Paying Lease Property Tax		Approved	
222		FEMA Engineering Services Award		Approved	
223		RV Park Improvements Contract Approval		Approved	
224			DEQ Tier II Requirements		
225			Feature Film Production on Port Property		
226			Tidewinds Sportfishing Request to Change Charter Fees		
227	Thursday, October 28, 2021	FEMA DR-4432/4452 Professional Engineering Service Contract Approval		Approved	

42

## **ACTION ITEM – A**

---

**DATE:** November 17, 2021  
**RE:** Resolution 2021-12 Adopting Property Tax Payment Policy  
**TO:** Honorable Board President and District Board Members  
**ISSUED BY:** Gary Dehlinger, Port Manager

---

### OVERVIEW

- Board approved paying the lease property tax and invoicing the tenants for reimbursement during the regular meeting on October 20, 2021.
- This resolution will memorialize Board approval.
- Port legal counsel reviewed the resolution.

### DOCUMENTS

- Draft Resolution 2021-12 Adopting Property Tax Payment Policy, 1 page

### COMMISSIONERS ACTIONS

- **Recommended Motion:**  
Motion to approve draft Resolution No. 2021-12 Adopting Property Tax Payment Policy.

**PORT OF BROOKINGS HARBOR  
CURRY COUNTY, OREGON**

**RESOLUTION NO. 2021-12**

**A RESOLUTION OF THE BOARD OF PORT COMMISSIONERS FOR THE PORT OF  
BROOKINGS HARBOR ADOPTING PROPERTY TAX PAYMENT POLICY**

**WHEREAS**, the Port of Brookings Harbor is a port district, organized and operated under the provisions of ORS Chapter 777, and has the authority to adopt resolutions; and

**WHEREAS**, the commercial lease tenants are required to pay the real property tax applicable to their leased premises as described in lease documents; and

**WHEREAS**, the Port of Brookings Harbor becomes the responsible party if the tenant fails to pay Curry County the real property tax; and

**WHEREAS**, on October 20, 2021, the Port Commission unanimously approved the Port paying Curry County the real property tax beginning this year and every year thereafter and then invoicing the tenants for reimbursement.

**NOW, THEREFORE**, be it resolved by the Board of Commissioners of the Port of Brookings Harbor, Curry County, Oregon as follows:

1. The Port of Brookings Harbor Board of Commissioners approve the Port paying Curry County the real property tax for the leased premises for each tenant beginning this year and every year thereafter.
2. Tenants will be invoiced the exact tax amount paid without any additional charges. Late payments to the Port will be charged at the normal late fee rate.
3. All new or amended leases will be revised to reflect this resolution.
4. All commercial tenants are to be given a copy of this resolution.

**APPROVED AND ADOPTED** and made effective the same day by the Board of Port Commissioners of the Port of Brookings Harbor this 17th day of November, 2021.

**ATTEST:**

\_\_\_\_\_  
Richard Heap, President

\_\_\_\_\_  
Sharon Hartung, Secretary/Treasurer

## ACTION ITEM – B

---

**DATE:** November 17, 2021  
**RE:** Charter Fee Change Request  
**TO:** Honorable Board President and District Board Members  
**ISSUED BY:** Gary Dehlinger, Port Manager

---

### OVERVIEW

- Port received a letter from Tidewinds Sportfishing requesting to change how the Port charges for charter fees.
- We contacted other Ports in Oregon to find out how they charge charter fees, and this is what we have found:

Port of Astoria	\$4 above moorage rate*
Port of Garibaldi	Charge normal moorage
Port of Siuslaw	\$100 / Annually
Salmon Harbor – Winchester Bay	\$250 / Annually
Coos Bay – Port of Charleston	\$200 / Month**
Port of Bandon	Charge normal moorage
Port of Gold Beach	Charge normal moorage
Port of Newport	\$382.20 / Annually

\*Without office rental space.

\*\*If no moorage or office rental space.

- Port of Brookings Harbor is the only Port in Oregon that charges a per person capacity fee.
- Port staff recommends removing the charter fee if the boat owner has moorage or office rental space at the Port. If no moorage or office rental space, a monthly fee could be set at \$200.

### DOCUMENTS

- None

### COMMISSIONERS ACTIONS

- **Recommended Motion:**  
Motion to approve removing the per person charter fee from the current Port Rates July 1, 2021 to June 30, 2022. Approve the new charter fee for non-moorage or non-office rental space at \$\_\_\_\_\_ per month.

## **ACTION ITEM – C**

---

**DATE:** November 17, 2021  
**RE:** Warranty Information on New Ford Trucks  
**TO:** Honorable Board President and District Board Members  
**ISSUED BY:** Gary Dehlinger, Port Manager

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### OVERVIEW

- To clarify the tax question during the last meeting. State of Oregon has a Corporate Activity Tax at .4%.
- The Maverick offers the same standard warranty package of other new Fords, which is fairly basic and offers no complimentary scheduled maintenance program.
  - Limited warranty covers 3 years or 36,000 miles.
  - Powertrain warranty covers 5 years or 60,000 miles.
  - Hybrid component warranty covers 8 years or 100,000 miles.
  - No complimentary scheduled maintenance.
- PremiumCare Plan is 84 months / 7 years or 100,000 miles at \$2,530. See attached for coverages.
- ExtraCare Plan is 84 months / 7 years or 100,000 miles at \$2,220. See attached for coverages.
- Customize Plan from 3 years to 8 years or 36,000 to 150,000 miles.
- Port staff recommends the PremiumCare package if the Board approves extended warranty plan.

### DOCUMENTS

- Tax and Standard Warranty Package, 2 pages
- PremiumCare Plan, 3 pages
- ExtraCare Plan, 3 pages
- Customized Plan, 1 page

### COMMISSIONERS ACTIONS

- **Recommended Motion:**  
Motion to approve adding the PremiumCare package for the new Ford trucks.

Tax:

It is the Corporate Activity Tax (CAT Tax) for .4%. We collect it and it goes to the state.

The options for mileage and term are on one of the pages I sent to you. There are other warranties that cover less options all the way down to just a powertrain warranty, each one costing less money.

Does that answer your questions?



## 2022 Maverick > Specs

### Warranties

#### 24-HOUR ROADSIDE ASSISTANCE<sup>(1)</sup>

- Owners can call the toll-free number (1-800-241-3673) 24 hours a day
- Customers can also use their FordPass<sup>(2)</sup> App:
  - Tap the red Hazard Icon at the top of the screen
  - Tap the Make an e-Request button
  - Follow the prompts, which allow owners to identify the type of service they need
  - Owners can follow real-time progress of their request on the FordPass map
- Services available include flat tire change, towing to the nearest Ford dealership, fuel delivery, jump start and lockout assistance
- The FordPass App also offers a link to Accident Assistance under Vehicle Details/Vehicle Support
  - Accident Assistance includes information on what to do in an accident and about collision repairs
  - It also provides a collision shop locator that identifies the nearest Ford Certified Collision Center



#### POWERTRAIN LIMITED WARRANTY

- Powertrain Limited Warranty for Ford vehicles is 5 years or 60,000 miles, whichever comes first
- That's an additional 2 years/24,000 miles (whichever comes first) of coverage beyond the bumper-to-bumper coverage for components such as the engine, transmission and front- or rear-wheel-drive parts

#### NEW VEHICLE LIMITED WARRANTIES

- 3-year/36,000-mile (whichever comes first) bumper-to-bumper; no deductible
- 5-year/60,000-mile (whichever comes first) Powertrain Limited Warranty
- 5-year/unlimited-mileage (whichever comes first) Corrosion Perforation (aluminum panels don't require perforation)
- 5-year/60,000-mile (whichever comes first) Safety Restraint Warranty

#### HYBRID COMPONENT WARRANTY

- Under the Unique Component Warranty, Ford provides coverage of the high-voltage battery for 8 years or 100,000 miles (whichever occurs first)
- Refer to the Vehicle Warranty Guide for a complete list of all of the parts covered

#### EMISSIONS WARRANTIES

Refer to Vehicle Warranty Guide for emissions warranty coverage.

(1) Roadside Assistance is included for certain owners and available to everyone for a per-service fee. Ford reserves the right to change program details without obligations. Ford Roadside Assistance is a complimentary offering to all Ford owners for up to 5 years or 60,000 miles (from the date of sale), whichever occurs first.

(2) FordPass, compatible with select smartphone platforms, is available via a download. Message and data rates may apply.

NOTE: See [www.motorcraftservice.com](http://www.motorcraftservice.com) for a link to a printable PDF of the Warranty Guide.



Prem. CARE Pg. 1



## ENGINE

- All Internally Lubricated Parts
- Cylinder Block
- Cylinder Heads
- Diesel Fuel Injectors
- Diesel Injector Lines
- Diesel Injector Pump
- Diesel Lift Pump
- Engine Mounts
- Flywheel
- Flywheel Ring Gear
- Fuel Tank and Metal Lines
- Gas Fuel Injectors
- Gas Injector Lines
- Harmonic Balancer and Bolt
- Manifold (Exhaust and Bolts)
- Manifold (Intake and Bolts)
- Oil Pan
- Oil Pump
- PCM Module
- Radiator
- Radiator Fan (Clutch or Motor)
- Seals and Gaskets
- Thermostat
- Thermostat Housing
- Timing Chain Cover
- Timing Chain (Gears or Belt)
- Turbocharger/Supercharger Unit (Factory-Installed)
- Valve Covers
- Water Pump



## TRANSMISSION

- All Internally Lubricated Parts
- Release Hubs and Bearings
- Seals and Gaskets
- Torque Converter
- Transfer Case (Including All Internal Parts)
- Transmission Case
- Transmission Linkage
- Transmission Module (External)
- Transmission Mounts



## ELECTRICAL

- LED Lighting or Lamp Assemblies – Interior and Exterior (Factory-Installed)\*
- Alternator
- Audiophile Sound System
- Charge and Volt Gauges
- Clock (Electric)
- Control Trac® 4WD System
- Driver's Seat Position Sensor
- Dual-Zone Electronic Auto Temp Control
- Electronic Ignition Module
- Fuel Pump
- Heated Backglass (Electrical Only – Not Glass Damage or Breakage)
- High-Intensity Discharge (HID) Headlamps\*, Igniter, Ballast
- Ignition Coil and Lock
- Ignition Module (Electric)
- Ignition Switch
- Incandescent/Halogen Bulbs – Interior and Exterior\*
- Intelligent 4WD Systems
- Power Mirrors (Electrical Only – Not Mirror or Glass Damage or Bulbs)
- Power Running Boards
- Radiator Fan Relay
- Rear Window Power Sunshade
- Speedometer/Odometer (Electrical and Mechanical)
- Starter Motor
- Starter Motor Solenoid
- Switches (Manually Operated Electrical)
- Temperature Gauge
- Voltage Regulator
- Wiper-Activated Headlamps
- Wiper Motors
- Wiring Harnesses (Excluding Spark Plug Wires)

\*Interior/Exterior Lighting – coverage included only if Lighting Option is purchased.



## BRAKES

- Anti-Lock Brake Module and Sensor
- Backing Plates
- Brake Booster (Power)
- Callipers
- Combination Valve
- ETA Pump Hose Assembly
- Metal Lines and Fittings
- Master Cylinder
- Parking Brake Linkage and Cables
- Retainers and Clips
- Self-Adjusters
- Shaft (Brake Pedal)
- Springs
- Wheel Cylinders



## FRONT AND REAR SUSPENSION

- Ball Joints (Upper and Lower)
- Control Arms (Upper and Lower)
- Control Arm Shafts and Bushings
- Kingpins and Bushings
- Linkage and Bushings
- Load Leveler Suspension System
- MacPherson Struts
- Roll Stability Control
- Spindle and Spindle Support Springs
- Stabilizer Bar
- Tie Rods



## REAR/FRONT-WHEEL-DRIVE AXLE

- Axle Shafts
- Bearings (Front and Rear)
- Rear: Drive Axle Housing and Front Axle Housing for 4x4 (Including All Internal Parts)
- Front: Final Drive Housing and Rear Axle Housing for AWD (Including All Internal Parts)
- Driveshaft
- Hubs, Automatic Front Locking (Four-Wheel Drive)
- Locking Rings (Four-Wheel Drive)
- Seals and Gaskets
- Universal and Constant Velocity Joints



## EMISSIONS

- Air Check Valve Assembly
- Air Control Valve
- Air Idle Vacuum Valve
- Air Supply Valve (Hose and Tube)
- Barometric Pressure Sensor
- DEF System (Excludes Catalyst)
- ECC Relay Assembly
- EGR Control Valve
- EGR Pressure Sensor
- EGR Regulator Assy
- EGR Valve Adapter
- Electronic Throttle Control
- EVAP Vapor Storage Canister
- Idler Air Control Valve
- Knock Sensor
- Mass Air Flow/intake
- Air Temp Sensor
- Oxygen Sensor
- PCV Hose Assembly
- PCV Valve
- PCV Vapor Filter
- Reductant Urea System
- Temperature Sensor (Engine Coolant)
- Vacuum Restrictor
- VAF Sensor
- Variable Camshaft Timing (VCT) Phasers

## The Ford Protect PremiumCARE Extenc

Generally Covered by Your Auto Insurance – Examples include: fixed (non-moving) body parts, bumpers, glass, moldings, ornamentation, paint, rust, sheet metal, structural underbody framework, side and rearview mirrors (glass and housing), water leaks, wind noise, weather strips, wheels, wheel studs, wheel covers, convertible top and bow.

# O+ Covered Components

(Partial List)

## AIR CONDITIONING & HEATING



- A/C Accumulator
- A/C Clutch
- A/C Clutch Bearings
- A/C Compressor
- A/C Compressor Clutch Switch
- A/C Compressor Head
- A/C Compressor Seals
- A/C Condenser
- Auto Temp Control
- Evaporator
- Field Coil
- Heater Blower Motor
- Heater Control Assembly
- Heater Core Assembly
- Instrument Panel Registers and Air Ducts
- Pulley

## HIGH-TECH



- Adaptive Cruise Control
- Adaptive Headlamp System (Excluding Lamp Housing, Bulbs)
- Air Suspension (Selected Electronic Components)
- Anti-Theft Alarm (Factory-Installed)
- Auto Lock and Auto Unlock System
- Automatic Park Assistant
- FordLink™ System
- Ford Work Solutions Asset Security (If equipped)
- Forward Sensing Sys
- Fuel Mixer (Alternative)
- In-Dash Garmin® Voice-Activated Navigation System (Factory-Installed and Dealer)
- Instrument Cluster (Excluding Dash Pad)
- Intelligent Oil Life Monitor® System
- Keyless Entry System (Excluding Door Handles)
- Message Center
- Parallel Park Assist Sys
- Power Antenna
- Power Door Locks and Retainer Clips (Excludes Door Handles)
- Power Seat Motors
- Power Window Motors/Regulators
- Rain-Sensing Wipers
- Rear Console Refrigeration
- Reverse Camera Sys
- Reverse Sensing Sys
- SecuriCode™ Keyless Entry
- SecurILock® Passive Anti-Theft Ignition System
- Sensor (Alcohol)
- SOS Post-Crash Alert System
- Speed Control
- Stationary Elevated Ride Control
- SYNC® MyFord Touch® (Excludes Software Upgrades)
- Trailer Brake Module
- Unique Hybrid/Electric Vehicle Components (Excluding High-Voltage Battery and Cables)

## AUDIO



- Antenna, Radio (Base Assembly)
- Brackets
- Cables and Wiring
- Cellular Phone, Receiver, Handset, Speaker Assembly and Antenna (Factory-Installed)
- Compass and Therm Readout Displays
- Controls (Rear Seat)
- Radio (AM, AM/FM), Speakers, Cassette Player, Digital CD Player, Graphic Equalizer, Premium Sound Amplifier (Factory-Installed)
- Rear Entertainment System (Factory-Installed)

## SAFETY



- Airbag Module Assembly
- Blind Spot Info Sys (Electrical Only – Not Mirror or Glass Damage or Bulbs)
- Collision Avoidance Sys
- Cross-Traffic System
- Diagnostic Module Assembly (Airbag)
- Door Ajar Warning Switch Assembly
- Guides, Bezels, Brackets and Supports (Safety Belts/Shoulder Straps)
- Head Restraint Retainers and Sleeves (Safety Belt)
- Key, SecurILock® (Microchip-Encoded Key)
- Lane Depart Warning
- Lock Cylinder (Door)
- Lock Lever Assy (Door)
- Lock Lever Assembly (Tailgate)
- Lock Lever Retainers, Clips and Brackets
- Module (Passive Restraint)
- Safety Belt Buckle (Front and Rear)
- Safety Belt Motor Drive Assembly
- Safety Belt Restraint Carrier
- Safety Belt Retractors
- Safety Belt Track Assy
- Safety Belt Warning Chime Assembly
- Safety Canopy Sensors (Airbag)
- Shoulder Strap Track Assembly
- Wiring Assy (Airbag)

## STEERING



- Column Lock (Tilt Wheel)
- Control Valve
- Cooler and Metal Lines
- Electronic Power-Assisted Steering
- Idler Arm
- Power Steering Pump/Electric Power Steering Actuator
- Pulley Assembly
- Seals and Gaskets
- Steering Column
- Steering Gear Housing, Manual and Power (Including All Internal Parts)
- Steering Shaft
- Underbody Linkages and Couplings

Service Plan is so comprehensive, it's easier to refer you to what isn't covered – here are the highlights:

**Repairs Related to Your Maintenance Requirements** – Items listed in your vehicle's owner guide. Examples include: batteries of all types and cables, belts, hoses, hose clamps, brakes (front hub, drums, shoes, linings, disc rotors, pads), manual transmission clutch disc, exhaust system (includes catalytic converter), spark plugs, squeaks, rattles, tires, wheel balancing, wheel alignment, all lamps and lights (LED and HID lights, bulbs, sealed beam and lenses) except when purchased with New or Incomplete PremiumCARE Interior/Exterior Lighting Option, fogging of lamp assemblies, shock absorbers, service adjustments and cleaning, and scheduled maintenance services.

**Other Components and Repairs** – Fabric, liners, fasteners, carpets, dash pad, wiper blades, knobs, trim, upholstery, physical damage or cosmetic issues, repairs covered by manufacturer recalls, any insurance or if the vehicle is within the time and mileage limits of any warranty, repairs caused by improper unreasonable use, unauthorized alterations or modifications of the vehicle, and repairs caused by lack of required or recommended maintenance. Costs or expenses for the teardown, rental expense, inspection or diagnosis of failures not covered by this Agreement. Refer to contract for details.

**NATIONAL VEHICLE SERVICE CONTRACT APPLICATION, TERMS & CONDITIONS**  
 (Excludes Medium Duty, Incomplete and Diesel EngineCARE plans)



PROTECT

Vehicle Identification Number ("VIN") (17 Digits) 3FTTW8E31NRA09634		Signature Date 10/26/2021	Warranty Start Date 10/26/2021	<b>FBA/L-CPO Upgrade Plans</b> <input type="checkbox"/> FBA (Gold) <input type="checkbox"/> FBA (Blue) <input type="checkbox"/> L-CPO <b>Non-CPO Wraps</b> <input type="checkbox"/> Powertrain
Internet Sale <input type="checkbox"/>	IPP <input type="checkbox"/>	IPP Term	Current Mileage 12	
<b>Surcharges:</b> <input type="checkbox"/> 12 Months/12,000 Miles <input type="checkbox"/> Snowplow <input type="checkbox"/> Commercial Use <input type="checkbox"/> 36 Months/36,000 Miles (Ford Competitive Make) or 48 Months/50,000 Miles (Lincoln Vehicles) <input type="checkbox"/> Specialty - Emergency (Fire, Ambulance, Police [Non-Ford], Limo, Livery, Shuttle, Tow Truck)				

- New Plan Coverage:** (Coverage begins at Warranty Start Date and Zero Miles)
- Core or FBA Gold (Ford) Upgrade - PowertrainCARE, BaseCARE, ExtraCARE, PremiumCARE (Standard Deductible is \$100)
  - L-CPO (Lincoln) - PremiumCARE (Standard Deductible is \$100)
  - PowertrainCARE Wraps - (Standard Deductible is \$100)
  - LeaseCARE - New PremiumCARE with Wear Items (Standard Deductible is \$0)
  - RentalCARE - (Standard Deductible is \$0)
- Used Plan Coverage:** (Coverage begins at Signature Date and Current Miles)
- Core - PowertrainCARE, BaseCARE, ExtraCARE, PremiumCARE (Standard Deductible is \$100)
  - FBA(Blue) Upgrade (3 months/4,000 miles) - PowertrainCARE, BaseCARE, ExtraCARE, PremiumCARE (Standard Deductible is \$100)

PLAN COVERAGE	Deductible	Plan Term		Plan Expiration - (Earliest of)		Purchase Price	Sales Tax	Total Purchase Price with Sales Tax
		Month	Mileage	Date	Mileage			
<input checked="" type="checkbox"/> New <input type="checkbox"/> Used PremiumCARE	\$100	84	100000	10/26/2028	100000	2530.00	0.00	\$2530.00

Options     Enhanced Rental     Pick Up & Delivery     Key Services Delete     Interior/Exterior Lighting Delete     First Day Rental Delete

**DISCLOSURE INFORMATION:**  
 THIS IS NOT AN INSURANCE CONTRACT. THE PURCHASE OF THIS AGREEMENT IS NOT REQUIRED IN ORDER TO PURCHASE, OR OBTAIN FINANCING FOR A MOTOR VEHICLE. YOU MAY PURCHASE THE SERVICE CONTRACT BY CASH OR UNSECURED CREDIT CARD. IF YOU ELECT TO PURCHASE THIS AGREEMENT, IT GIVES YOU SPECIFIC LEGAL RIGHTS, WHICH MAY VARY FROM STATE TO STATE. I acknowledge receipt of a complete copy of this Application and Terms and Conditions (the "Agreement") at signing and agree to all the terms and conditions. I agree to maintain the covered vehicle in accordance with the manufacturer's stated periodic maintenance recommendations as a condition of receiving coverage under this Agreement, except as otherwise provided by law.

**SERVICE CONTRACT HOLDER/PURCHASER**

Name PORT OF BROOKINGS	
Signature (Not Valid without Signature)	Signature Date 10/26/2021
Address (City/State/Zip Code) 16330 LOWER HARBOR RD BROOKINGS OR 97415	
Customer's E-Mail Address	
Service Contract Lienholder Name	

**DEALERSHIP INFORMATION**

Dealership Signature	
Dealer Name Lithia Ford of Klamath Falls	Telephone No
Address (City/State/Zip Code) 2833 Washburn Way Klamath Falls OR 976034519	
Employee Stars Id	P&A Code 0 4 1 4 8

# ExtraCARE

# 113

Enjoy your vehicle worry-free, long after your New Vehicle Limited Warranty expires.

- With 113 key component parts covered, you're protected for covered repairs down the road
- Customize a plan that's right for you based on your driving needs

**With the Ford Protect ExtraCARE Extended Service Plan, you can protect your vehicle for up to the earlier of 8 years or 150,000 miles.**

That's well beyond the New Vehicle Limited Warranty that comes with your vehicle. With the high cost of parts and unexpected repairs that come with owning a vehicle, it just makes sense to protect your investment with a Ford Protect ExtraCARE Extended Service Plan.

### The numbers speak for themselves:

Choose the \$0 deductible option with a Ford Protect ExtraCARE Extended Service Plan.

Engine ~~\$5,443~~ \$0      Steering Gear ~~\$1,492~~ \$0      Transmission ~~\$5,336~~ \$0



Rear Differential ~~\$1,563~~ \$0

A/C Evaporator Core ~~\$1,489~~ \$0

*These examples are based on an average estimated U.S. retail repair cost for 2011-2015 Explorer. Actual repair costs will vary by vehicle and dealer location.*



### ENGINE

- All Internally Lubricated Parts
- Cylinder Block
- Cylinder Heads
- Diesel Fuel Injectors
- Diesel Injector Lines
- Diesel Injector Pump
- Diesel Lift Pump
- Engine Mounts
- Flywheel
- Flywheel Ring Gear
- Fuel Tank and Metal Lines
- Gas Fuel Injectors
- Gas Injector Lines
- Harmonic Balancer and Bolt
- Manifold Intake and Bolts
- Manifold (Exhaust and Bolts)
- Oil Pan
- Oil Pump
- Radiator
- Radiator Fan (Clutch or Motor)
- Seals and Gaskets
- Thermostat
- Thermostat Housing
- Timing Chain Cover
- Timing Chain (Gears or Belt)
- Turbocharger/Supercharger Unit (Factory-Installed)
- Valve Covers
- Water Pump



### TRANSMISSION

- All Internally Lubricated Parts
- Seals and Gaskets
- Torque Converter
- Transfer Case (Including All Internal Parts)
- Transmission Case
- Transmission Module (External)
- Transmission Mounts
- Transmission Vacuum Module



### ELECTRICAL

- Alternator
- Electronic Ignition Module
- Fuel Pump
- Heated Backglass (Electrical Only - Not Glass Damage or Breakage)
- Ignition Switch
- Radiator Fan Relay
- Speedometer/Odometer (Electrical and Mechanical)
- Starter Motor
- Starter Motor Solenoid
- Switches (Manually Operated Electrical)
- Voltage Regulator
- Wiper Motors
- Wiring Harnesses (Excluding Spark Plug Wires)



### BRAKES

- Anti-Lock Brake Module and Sensor
- Backing Plates
- Brake Booster (Power)
- Callipers
- Combination Valve
- ETA Pump Hose Assembly
- Master Cylinder
- Metal Lines and Fittings
- Parking Brake Linkage and Cables
- Retainers and Clips
- Self-Adjusters
- Shaft (Brake Pedal)
- Springs
- Wheel Cylinders

EXTRA CARE Pg. 1

# Key Covered Component Parts

DRIVE ON WITH THE ONE PLAN THAT  
COVERS 113 KEY COMPONENT PARTS.



## FRONT SUSPENSION

- Ball Joints (Upper and Lower)
- Control Arms (Upper and Lower)
- Control Arm Shafts and Bushings
- Kingpins and Bushings
- Linkage and Bushings
- MacPherson Struts
- Spindle and Spindle Supports
- Stabilizer Bar
- Tie Rods



## REAR/FRONT-WHEEL-DRIVE AXLE

- Axle Shafts
- Rear: Drive Axle Housing and Front Axle Housing for 4x4 (Including All Internal Parts)
- Front: Final Drive Housing and Rear Axle Housing for AWD (Including All Internal Parts)
- Driveshaft
- Hubs, Automatic Front Locking (Four-Wheel Drive)
- Locking Rings (Four-Wheel Drive)
- Seals and Gaskets
- Universal and Constant Velocity Joints



## STEERING

- Column Lock (Tilt Wheel)
- Control Valve
- Cooler and Metal Lines
- Idler Arm
- Power Steering Pump/ Electric Power Steering Actuator
- Pulley Assembly
- Seals and Gaskets
- Steering Gear Housing, Manual and Power (Including All Internal Parts)
- Underbody Linkages and Couplings



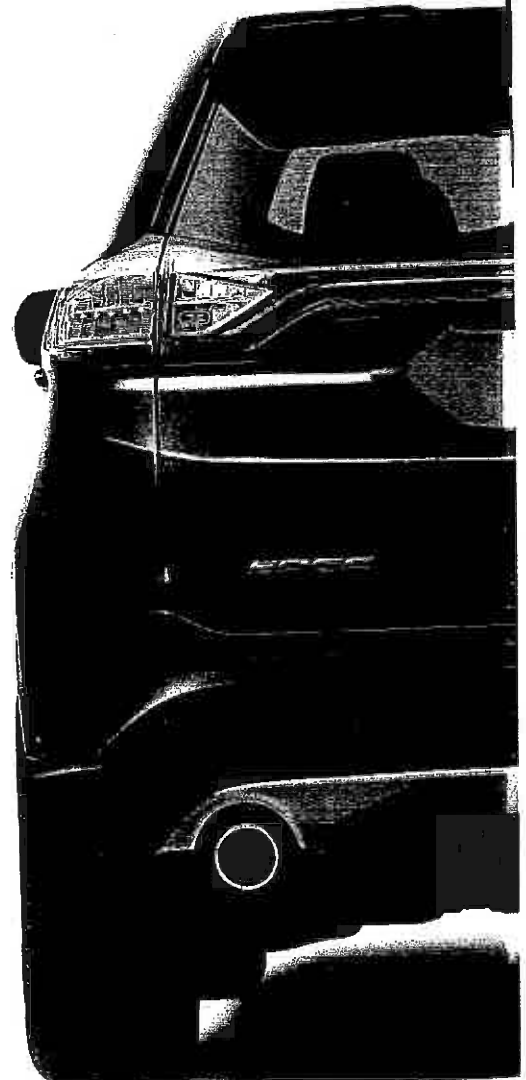
## AIR CONDITIONING & HEATING

- A/C Accumulator
- A/C Clutch
- A/C Clutch Bearings
- A/C Compressor
- A/C Compressor Clutch Switch
- A/C Compressor Head
- A/C Compressor Seals
- A/C Condenser
- Auto Temp Control
- Evaporator
- Field Coil
- Heater Blower Motor
- Heater Control Assembly
- Heater Core Assembly
- Pulley



## HIGH-TECH

- Adaptive Cruise Control
- Air Suspension (Selected Electronic Components)
- Instrument Cluster, Electronic (Excluding Dash Pad, Clock, Audio and Visual Equipment)
- Keyless Entry System (Excluding Door Handles)
- Power Antenna
- Power Door Locks and Retainer Clips (Excluding Door Handles)
- Power Seat Motors
- Power Window Motors/Regulators
- SecuriCode™ Keyless Entry
- Speed Control



EXTRA CARE Pg. 2

# NATIONAL VEHICLE SERVICE CONTRACT APPLICATION, TERMS & CONDITIONS

(Excludes Medium Duty, Incomplete and Diesel EngineCARE plans)



PROTECT

Vehicle Identification Number ("VIN") (17 Digits) 3FTTW8E31NRA09634			Signature Date 10/26/2021	Warranty Start Date 10/26/2021	<b>FBA/L-CPO Upgrade Plans</b>
Internet Sale <input type="checkbox"/>	IPP <input type="checkbox"/>	IPP Term	Current Mileage 12	<input type="checkbox"/> FBA (Gold) <input type="checkbox"/> FBA (Blue) <input type="checkbox"/> L-CPO	
<b>Surcharges:</b> <input type="checkbox"/> 12 Months/12,000 Miles <input type="checkbox"/> Snowplow <input type="checkbox"/> Commercial Use <input type="checkbox"/> 36 Months/36,000 Miles (Ford Competitive Make) or 48 Months/50,000 Miles (Lincoln Vehicles) <input type="checkbox"/> Specialty - Emergency (Fire, Ambulance, Police [Non-Ford], Limo, Livery, Shuttle, Tow Truck)				<input type="checkbox"/> <b>Non-CPO Wraps</b> <input type="checkbox"/> Powertrain	

- New Plan Coverage:** (Coverage begins at Warranty Start Date and Zero Miles)
- Core or FBA Gold (Ford) Upgrade - PowertrainCARE, BaseCARE, ExtraCARE, PremiumCARE (Standard Deductible is \$100)
  - L-CPO (Lincoln) - PremiumCARE (Standard Deductible is \$100)
  - PowertrainCARE Wraps - (Standard Deductible is \$100)
  - LeaseCARE - New PremiumCARE with Wear Items (Standard Deductible is \$0)
  - RentalCARE - (Standard Deductible is \$0)
- Used Plan Coverage:** (Coverage begins at Signature Date and Current Miles)
- Core - PowertrainCARE, BaseCARE, ExtraCARE, PremiumCARE (Standard Deductible is \$100)
  - FBA(Blue) Upgrade (3 months/4,000 miles) - PowertrainCARE, BaseCARE, ExtraCARE, PremiumCARE (Standard Deductible is \$100)

PLAN COVERAGE	Deductible	Plan Term		Plan Expiration - (Earliest of)		Purchase Price	Sales Tax	Total Purchase Price with Sales Tax
		Month	Mileage	Date	Mileage			
<input checked="" type="checkbox"/> New <input type="checkbox"/> Used								
ExtraCARE	\$100	84	100000	10/26/2028	100000	2220.00	0.00	\$2220.00

Options     Enhanced Rental     Pick Up & Delivery     Key Services Delete     Interior/Exterior Lighting Delete     First Day Rental Delete

### DISCLOSURE INFORMATION:

THIS IS NOT AN INSURANCE CONTRACT. THE PURCHASE OF THIS AGREEMENT IS NOT REQUIRED IN ORDER TO PURCHASE, OR OBTAIN FINANCING FOR A MOTOR VEHICLE. YOU MAY PURCHASE THE SERVICE CONTRACT BY CASH OR UNSECURED CREDIT CARD. IF YOU ELECT TO PURCHASE THIS AGREEMENT, IT GIVES YOU SPECIFIC LEGAL RIGHTS, WHICH MAY VARY FROM STATE TO STATE. I acknowledge receipt of a complete copy of this Application and Terms and Conditions (the "Agreement") at signing and agree to all the terms and conditions. I agree to maintain the covered vehicle in accordance with the manufacturer's stated periodic maintenance recommendations as a condition of receiving coverage under this Agreement, except as otherwise provided by law.

### SERVICE CONTRACT HOLDER/PURCHASER

Name PORT OF BROOKINGS	Signature Date 10/26/2021
Signature (Not Valid without Signature)	
Address (City/State/Zip Code) 16330 LOWER HARBOR RD BROOKINGS OR 97415	
Customer's E-Mail Address	
Service Contract Lienholder Name	

### DEALERSHIP INFORMATION

Dealership Signature	
Dealer Name Lithia Ford of Klamath Falls	Telephone No
Address (City/State/Zip Code) 2833 Washburn Way Klamath Falls OR 976034519	
Employee Stars Id	P&A Code 0 4 1 4 8

E

**Drive On with Confidence.**

With a Ford Protect PremiumCARE Extended Service Plan, you are protected from unforeseen covered repairs on your vehicle for up to the earlier of 8 years or 150,000 miles.



That's well beyond the New Vehicle Limited Warranty that comes with your vehicle. Now is the time to protect your investment with a Ford Protect PremiumCARE Extended Service Plan.

**Why Ford Protect PremiumCARE is such a great value.**

The price for parts and labor to repair many major components can be significant. One repair bill can easily exceed the price of your Ford Protect PremiumCARE coverage. It's clear that this coverage can quickly pay for itself!

Engine\* **\$5,863**      Steering Gear\* **\$1,708**      Transmission\* **\$5,782**

Airbag\* **\$1,048**      Headlamp/Tail Lamp Assembly\* **\$1,954**      A/C Evaporator Core\* **\$1,994**

DEDUCTIBLE OPTIONS		
	STANDARD	OPTIONAL
New Ford and Competitive-make Vehicle Plans	\$100	\$0, \$50, \$200, Disappearing
Used Ford and Competitive-make Vehicle Plans	\$100	\$50, \$200, Disappearing

\*These examples are based on an average estimated U.S. retail repair cost for 2013-2016 Escape. Actual repair costs will vary by vehicle and dealer location.

**Drive On with Peace of Mind.**

Based on your driving needs, you can customize a Ford Protect PremiumCARE Extended Service Plan that's right for you.

TIME AND MILEAGE OPTIONS (Hours Not Shown) Available within New Vehicle Limited Warranty						
Plan Length or Miles Covered (Coverage ends at the earlier of years or mileage)	3 Years	4 Years	5 Years	6 Years	7 Years	8 Years
36,000 Miles	■	■	✓	✓	✓	✓
48,000 Miles	✓	✓	✓	✓	✓	✓
60,000 Miles	✓	✓	✓	✓	✓	✓
75,000 Miles	✓	✓	✓	✓	✓	✓
100,000 Miles	✓	✓	✓	✓	✓	✓
125,000 Miles	✓	✓	✓	✓	✓	✓
150,000 Miles	✓	✓	✓	✓	✓	✓

USED PLAN TIME AND MILEAGE OPTIONS Available Beyond the New Vehicle Limited Warranty	
Coverage lengths range from 1 year/12,000 miles to 5 years/75,000 miles for 2006 and newer vehicles.	

*DIFFERENT OPTIONS FOR TIME + MILES*

## ACTION ITEM – D

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**DATE:** November 17, 2021  
**RE:** Chetco River Bar Camera Sponsorship Agreement  
**TO:** Honorable Board President and District Board Members  
**ISSUED BY:** Gary Dehlinger, Port Manager

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### OVERVIEW

- Port's bar camera has the most activity on our website. Over 8,000 views last month.
- When the bar camera was reinstalled, the plan was to allow sponsorship/advertisement to be placed on the bar camera website to help offset the costs of the camera and live feed.
- Pacific Seafood is providing power and allowed the Port to place the camera on their building at no charge. We felt it was appropriate to place Pacific Seafood on the website as a sponsor.
- This agreement will provide the guidelines to allow other businesses to be placed on the bar camera website.
- Port staff is recommending \$100 sponsorship fee per month.
- Port legal counsel provided the agreement form.

### DOCUMENTS

- Chetco River Bar Camera Sponsorship Agreement, 1 page
- Website Site Activity for October 2021, 1 page

### COMMISSIONERS ACTIONS

- **Recommended Motion:**  
Motion to approve Chetco River Bar Camera Sponsorship Agreement form and the \$100 sponsorship fee per month.





# Port of Brookings Harbor

16330 Lower Harbor Road / PO Box 848  
Brookings, Oregon 97415  
Phone (541) 469-2218  
Fax (541) 359-3999  
www.portofbrookingsharbor.com

## Board of Commissioners

Richard Heap, President  
Joseph Speirs, Vice-President  
Sharon Hartung, Secretary/Treasurer  
Kenneth Range  
Larry Jonas

### CHETCO RIVER BAR CAMERA SPONSORSHIP AGREEMENT

DATE: \_\_\_\_\_ ACCT NO.: \_\_\_\_\_

SPONSOR NAME: \_\_\_\_\_

SPONSOR ADDRESS: \_\_\_\_\_  
\_\_\_\_\_

CONTACT NAME: \_\_\_\_\_

CONTACT PHONE: \_\_\_\_\_

CONTACT EMAIL: \_\_\_\_\_

#### SPONSORSHIP TERMS:

1. **SPONSORSHIP FEE.** Sponsorship fee is \$100 per month due and payable on or before the 5<sup>th</sup> day of every month. If payment is not received prior to the 5<sup>th</sup> day of the month, then the Port reserves the right to remove the Sponsor's recognition from the webpage.
2. **SPONSOR RECOGNITION.** Sponsor will be recognized by the Port of Brookings Harbor by having its name and/or logo displayed on the Chetco River Bar Camera webpage.
3. **TERMINATION.** Either party may terminate this agreement at any time and for any reason, or no reason at all, by providing the other party with written notice. Sponsor will only be responsible for sponsorship fees up to the date of termination.
4. **NO PARTNERSHIP.** This sponsorship agreement does not create any relationship of principal and agent or of partnership or joint venture between the parties and nothing herein shall be construed to make them agents, partners or joint venturers or impose any liability as such on either of them.
5. **ENTIRE AGREEMENT.** This is the entire agreement between the parties with respect to the subject matter herein. Any prior negotiations or implied promises that are not included in this agreement are of no force and effect.

SPONSOR'S REPRESENTATIVE:

PORT REPRESENTATIVE:

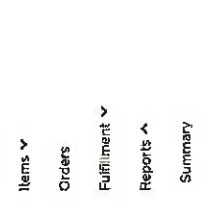
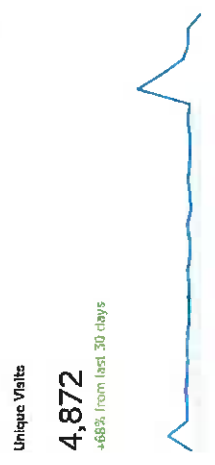
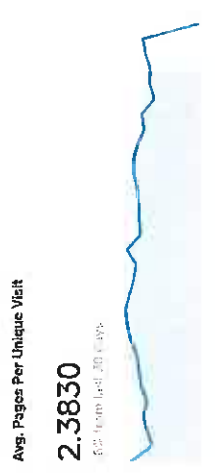
By: \_\_\_\_\_

By: \_\_\_\_\_

For Port Use:

AMT REC'D: \$ \_\_\_\_\_ BY: \_\_\_\_\_ DATE: \_\_\_\_\_

Daily ▼ September 30, 2021 - October 29, 2021



### Top Active Pages this Month

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/fishing.html	195	+73.58%
/marina.html	157	+73.25%
/rates.html	160	+77.29%

## ACTION ITEM – E

---

**DATE:** November 17, 2021  
**RE:** Public Dock Equipment Use Agreement & Release  
**TO:** Honorable Board President and District Board Members  
**ISSUED BY:** Gary Dehlinger, Port Manager

---

### OVERVIEW

- On occasions commercial vessels will bring their own equipment to the steel wall to remove or install poles and gear. If they are working under one of the receiving docks lessee's, they would fall under the tenant's responsibility for the dock and work being done.
- Now that our public hoist has returned, it would be a good idea to have an agreement for equipment being used on Port property that is not under a tenant's lease.
- This agreement would provide assumption of risk and hold harmless clauses and other information to allow an individual or company to use equipment on Port property.
- Port staff recommends an hourly rate of \$35 to use Port grounds.
- Port legal counsel reviewed the agreement.

### DOCUMENTS

- Public Dock Equipment Use Agreement & Release form, 1 page

### COMMISSIONERS ACTIONS

- **Recommended Motion:**  
Motion to approve Public Dock Equipment Use Agreement & Release form and the hourly rate at \$35.



# Port of Brookings Harbor

16330 Lower Harbor Road / PO Box 848  
Brookings, Oregon 97415  
Phone (541) 469-2218  
Fax (541) 359-3999  
www.portofbrookingsharbor.com

## Board of Commissioners

Richard Heap, President  
Joseph Speirs, Vice-President  
Sharon Hartung, Secretary/Treasurer  
Kenneth Range  
Larry Jonas

## Public Dock Equipment Use Agreement & Release

### USER INFORMATION:

Owner/Operator/Unloader ("Licensee"): \_\_\_\_\_ Phone: (\_\_\_\_) \_\_\_\_ -- \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Name of Vessel & Doc/Res Number: \_\_\_\_\_

### GENERAL TERMS AND CONDITIONS:

**PORT ORDINANCES:** This Agreement is subject to the Port of Brookings Harbor ordinances.

**PORT RESPONSIBILITY:** The Port of Brookings Harbor ("Port") will provide the scheduled usage of the Port premises.

**OWNER/OPERATOR/UNLOADER RESPONSIBILITY:** The Owner/Operator/Unloader ("Licensee") is responsible for the use of their equipment while on Port premises. "Port premises" includes all property owned by the Port specifically including, but not limited to, the public dock.

**ASSUMPTION OF RISK:** Licensee acknowledges full responsibility and agrees to make no claim for any damages whatsoever, but rather assumes the sole risk for himself/herself. For all claims, demand, suits, actions and proceedings against the Port, of every kind of nature, including without limitation, those sounding in contract or tort or for the breach of warranty, the laws of the State of Oregon shall be, without exception or limitation, binding and controlling law, and damages shall not exceed the amount set forth in the Oregon Tort Claims Act. Any and all suits, actions and proceedings, of every kind and nature whatsoever, against the Port shall be filed and maintained exclusively in the Circuit or District Court, as appropriate, of the State of Oregon, for the County of Curry.

**ATTORNEY'S FEES:** If any suit or action is instituted by either the Port of Licensee in connection with any controversy arising out of Licensee's use of equipment on Port premises, the prevailing party shall be entitled to recover in addition to costs such sum as the court may adjudge reasonable as attorney fees.

**HOLD HARMLESS:** The Port does not accept vessels or personal property for storage and accepts no responsibility or liability for the safe keeping thereof, including, loss of any kind, theft or damage of any kind or cause. Licensee is fully responsible for the care and safety of the vessel, Licensee's equipment and property, any contents and for himself/herself, his/her family, his/her employees or invitees to the Port's premises and agrees to hold the Port harmless and free from claim for any damages, injury or loss resulting from the acts or failure to act of Licensee, his/her family, his/her employees or invitees while using the Port's premises. Licensee hereby releases the Port, its officers, directors, Port Manager, employees, and agents from any and all liability of responsibility arising from Licensee's use of Port premises. Licensee agrees to indemnify and save harmless the Port, its officers, directors, Port Manager, employees, and agents with respect to any and all claims for damage to property or for injury to any persons that may arise as a result of the use of Port premises.

**ENVIRONMENTAL LAWS:** All applicable provisions of federal, state or local statutes, ordinances and regulations dealing with the prevention of environmental pollution and the preservation of natural resources that affect the work under this Agreement are by reference incorporated herein to the same force and affect as if set forth herein in full.

**RULES AND REGULATIONS:** Licensee agrees to comply at all times with any and all Rules and Regulations promulgated by any Federal, State, Local government authority or this Port. Further, Licensee agrees to abide by special requests made in the interests of public or vessel safety by Port Manager or his/her designee. It is the Licensee's responsibility to stay abreast of all rules and regulations concerning vessel use, the use of Port facilities, and the use of any specialized equipment. A copy of the Port's Ordinance is available from the Port Office or website.

**ACCEPTANCE OF PREMISES:** Licensee acknowledges he/she has inspected the Port's premises for use under this Agreement and accepts them in their present "AS-IS" condition. Licensee agrees to keep the premises neat, clean, free of hazardous or flammable materials and to preserve the Port's premises in as good condition and repair as they are now or may be put hereafter by the Port. Clean-up fees will be charged for each man-hour at established rates. Equipment charges and disposal of any material are extra.

**SCHEDULING:** Port premises may only be used during normal Port business hours unless approved by the Port Manager or his/her designee.

**PAYMENT:** The Licensee agrees to pay in full to the Port of Brookings Harbor the time used in one-hour increments. Past due accounts will be assessed a late charge of 1.5% per month (18% per annum). In the event, suit or action is instituted to collect any amount owed on this account, Licensee agrees to pay any reasonable attorney fees, collection agency fees and any other costs associated with such action. Failure to pay for charges or misuse of Port facilities may result in relinquishing all privileges or access to facilities and service of the Port of Brookings Harbor.

**BINDING EFFECT:** This agreement is binding upon the assignees, heirs, and successors of Licensee.

### I AGREE TO THE TERMS AND CONDITIONS ATTACHED TO THIS DOCUMENT:

USER ("Licensee"): \_\_\_\_\_  
Signature \_\_\_\_\_ Print Name \_\_\_\_\_ Date \_\_\_\_\_

### FOR PORT USE ONLY:

DATE OF USE: \_\_\_\_\_ TIME OUT: \_\_\_\_\_ TIME IN: \_\_\_\_\_ PORT INITIALS: \_\_\_\_\_

60

## ACTION ITEM – F

---

**DATE:** November 17, 2021  
**RE:** Bell and Whistle Coffee Shop Lease Renewal  
**TO:** Honorable Board President and District Board Members  
**ISSUED BY:** Gary Dehlinger, Port Manager

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### OVERVIEW

- Matt and Anna Powers have requested to extend the lease per the option provided in the lease for another 5-years for the business at the retail center.
- The amendment is necessary to confirm the renewal with the Port.
- Port legal counsel reviewed Amendment No. 2.

### DOCUMENTS

- Draft Commercial Lease Agreement Amendment No. 2, 1 page

### COMMISSIONERS ACTIONS

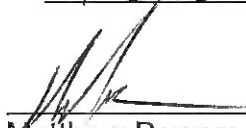

- **Recommended Motion:**  
Motion to approve Bell and Whistle Coffee Shop draft Commercial Lease Agreement Amendment No. 2.

**COMMERCIAL LEASE AGREEMENT  
AMENDMENT NO. 2**

This lease amendment ("Amendment") is entered into by and between the Port of Brookings Harbor ("Landlord") and Matthew Powers and Anna Powers DBA Bell & Whistle Coffee House ("Tenant") to amend the terms of the commercial lease dated December 1, 2016 and amended on August 7, 2019 ("Lease"). Tenant assumed the Lease from the previous tenant on September 24, 2020.

- 1. WAIVER.** Landlord waives Tenant's default for failing to provide at least 90 days' advance written notice of Tenant's intent to exercise its option to extend the Lease term for an additional five years as required by the Lease. This is not an express or implied waiver of Tenant's obligation to fulfill the same Lease provision in the future or any other Lease provision during the term of the Lease.
- 2. TERM.** The waiver of the default by Landlord results in a five-year extension to the term of the Lease for the period December 1, 2021 through November 30, 2026.
- 3. OTHER TERMS AND CONDITIONS.** All other terms and conditions of the original Lease agreement, which includes the terms of the agreement dated December 1, 2016 and amended on August 7, 2019 between the parties regarding lease terms, remain in full force and effect and remain unaffected hereby.

IN WITNESS WHEREOF, the parties have executed this instrument as of the date last below written at Curry County, Oregon.

<b>Port of Brookings Harbor, Landlord</b>	<b>Matthew and Anna Powers, dba Bell &amp; Whistle Coffee House, Tenant</b>
Dated: _____	Dated: <u>11-2-2021</u>
By: _____ Richard Heap, Board President	By:  Matthew Powers
ATTEST:  _____ Sharon Hartung, Board Secretary / Treasurer	By:  Anna Powers

## **ACTION ITEM – G**

---

**DATE:** November 17, 2021  
**RE:** Shanebrook Media Location Agreement  
**TO:** Honorable Board President and District Board Members  
**ISSUED BY:** Gary Dehlinger, Port Manager

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### OVERVIEW

- As discussed last month, Shanebrook Media was shooting scenes on a commercial vessel from the Port docks and some scenes on the boardwalk public areas.
- The crew ran into an issue needing a room to shoot a scene as the coast guard radio room. I gave them permission to shoot the scene using our front office.
- Since they used our Port Office, their assistant wanted a location agreement completed for the scene.
- Port legal counsel review the agreement. Only concern with the agreement that they can come back anytime if necessary to reshoot the scene or additional scenes, etc.

### DOCUMENTS

- Shanebrook Media Location Agreement, 2 pages

### COMMISSIONERS ACTIONS

- **Recommended Motion:**  
Motion to approve Shanebrook Media Location Agreement only if they provide notification to Port staff prior to reshooting on Port properties and authorize the Port Manager to sign the agreement on the behalf of the Port.

Shanebrook Media, LLC  
4324 Illinois Ave.  
Fair Oaks, California 95628  
Phone 323-828-2472

## Bad Fish: Location Agreement



1. I, the undersigned owner or agent, whichever is applicable, hereby irrevocably grants to Shanebrook Media, LLC ("Producer"), and its agents, employees, contractors and suppliers, the right to enter and remain upon and use the property, both real and personal, located at **Port of Brookings Harbor, 16340 Lower Harbor Rd Ste. 103 / Brookings, OR 97415** (the "Property"), including without limitation, all interior and exterior areas, buildings and other structures of the Property, and owner's name, logo, trademark, service mark and/or slogan, and any other identifying features associated therewith or which appear in, on or about the Property, for the purpose of photographing (including without limitation by means of motion picture, still or videotape photography) said premises, sets and structures and/or recording sound in connection with the production, exhibition, advertising and exploitation of the film, tentatively entitled *Bad Fish* (the "Picture").
2. Producer may take possession of said premises commencing on or about **October 29, 2021** subject to change because of weather conditions or changes in production schedule, and continuing until the completion of all scenes and work required.
3. Charges: As complete and no payment for all of the rights granted to Producer hereunder.
4. Producer may place all necessary facilities and equipment, including temporary sets, on the Property, and agrees to remove same after completion of work and leave the Property in as good condition as when received, reasonable wear and tear from uses permitted herein excepted. Signs on the Property may, but need not, be removed or changed, but, if removed or changed, must be replaced. In connection with the Picture, Producer may refer to the Property or any part thereof by any fictitious name and may attribute any fictitious events as occurring on the Property. Owner irrevocably grants to Producer and Producer's successors and assigns the right, in perpetuity, throughout the universe, to duplicate and recreate all or a portion of the Property and to use such duplicates and recreations in any media and/or manner now known or hereafter devised in connection with the Picture, including without limitation sequels and remakes, merchandising, theme parks and studio tours, and in connection with publicity, promotion and/or advertising for any or all of the foregoing.
5. Producer agrees to use reasonable care to prevent damage to the Property, and will indemnify and hold Owner harmless from and against any claims or demands arising out of or based upon personal injuries, death or property damage (ordinary wear and tear excepted), suffered by such person(s) resulting directly from any act of negligence on Producer's part in connection with the work hereunder.
6. All rights of every nature whatsoever in and to all still pictures, motion pictures, videotapes, photographs and sound recordings made hereunder, shall be owned by Producer and its successors, assigns and licensees, and neither Owner nor any tenant, or other party now or hereafter having an interest in said property, shall have any right of action against Producer or any other party arising out of any use of said still pictures, motion pictures, videotapes, photographs and or sound recordings, whether or not such use is or may be claimed to be, defamatory, untrue or censurable in nature. In addition, neither Owner nor any tenant, nor any other party now or hereafter having an interest in the Property, shall have any right of action, including, but not limited to, those based upon invasion of privacy, publicity, defamation, or other civil rights, in connection with the exercise of the permission and/or rights granted by Owner to Producer. If there is a breach by Producer hereunder, Owner shall be limited to an action at law for monetary damages. In no event shall Owner have the right to enjoin the development, production, distribution or exploitation of the Picture.
7. Force Majeure: If because of illness of actors, director or other essential artists and crew, weather conditions, defective film or equipment or any other occurrence beyond Producer's control, Producer is unable to start work on the date designated above and/or work in progress is interrupted during use of the Property by Producer, then Producer shall have the right to use the Property at a later date to be mutually agreed upon and/or to extend the period set forth in Paragraph 2, and any such use shall be included in the compensation paid pursuant to Paragraph 3 above.



8. At any time within 1 month from the date Producer completes its use of the Property hereunder, Producer may, upon not less than five (5) days prior written notice to Owner, reenter and use the Property for such period as may be reasonable necessary to photograph retakes, added scenes, etc. desired by Producer upon the same terms and conditions as contained in this agreement.

9. Owner warrants neither he or anyone acting for him, gave or agreed to give anything of value, except for use of the Property, to Producer or anyone associated with the production for using said Property as a shooting location.

10. Owner represents and warrants that he/she is the owner and/or authorized representative of the Property, and that Owner has the authority to grant Producer the permission and rights granted in this agreement, and that no one else's permission is required. If any question arises regarding Owner's authority to grant the permission and rights granted in this agreement, Owner agrees to indemnify Producer and assume responsibility for any loss and liability incurred as a result of its breach of the representation of authority contained in this paragraph, including reasonable attorneys' fees.

**Owner/agent:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Phone/Email:** \_\_\_\_\_

**Contact person on premises:** \_\_\_\_\_ **Phone:** \_\_\_\_\_

**By:** \_\_\_\_\_

**On behalf of:** \_\_\_\_\_, Lessee

## **ACTION ITEM – H**

---

**DATE:** November 17, 2021  
**RE:** Henry Johnson Draft Appreciation Letter  
**TO:** Honorable Board President and District Board Members  
**ISSUED BY:** Gary Dehlinger, Port Manager

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### OVERVIEW

- Board suggested to draft an appreciation letter to Henry Johnson for the beach toys at Beachfront RV Park.

### DOCUMENTS

- Draft appreciation letter, 1 page

### COMMISSIONERS ACTIONS

- **Recommended Motion:**  
Motion to approve draft appreciation letter to Henry Johnson.



## Port of Brookings Harbor

16330 Lower Harbor Road / PO Box 848  
Brookings, Oregon 97415  
Phone (541) 469-2218  
Fax (541) 359-3999  
www.portofbrookingsharbor.com

### Board of Commissioners

Richard Heap, President  
Joseph Speirs, Vice-President  
Sharon Hartung, Secretary/Treasurer  
Kenneth Range  
Larry Jonas

Henry Johnson  
Store Manager  
Brookings Fred Meyer  
325 5th Street  
Brookings, OR 97415

17 November 2021

Dear Mr. Johnson,

We, the Board of Harbor Commissioners of the Port of Brookings Harbor, want to thank you for establishing the Beach Toy "Libraries" at the Beachfront RV Park on Sporthaven Beach.

Our RV Park staff has shared with us the many positive comments they've gotten from both the general public and RV park guests. Visitors to the beach are thrilled by the thoughtfulness of providing toy lending kiosks.

Please accept this letter as a token of our appreciation for sharing your idea and making it a fun-filled reality for beach goers.

We look forward to continuing our partnership with you and the Brookings Fred Meyer for many summers to come.

Sincerely,

---

Richard Heap  
Board President

---

Joe Spier  
Vice-President

---

Sharon Hartung  
Secretary/Treasurer

---

Larry Jonas  
Commissioner

---

Ken Range  
Commissioner

# ACTION ITEM – I

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**DATE:** November 17, 2021  
**RE:** Strategic Business Plan Annual Review  
**TO:** Honorable Board President and District Board Members  
**ISSUED BY:** Gary Dehlinger, Port Manager

---

## OVERVIEW

- The Port's Strategic Business Plan (SBP) is designed to be a working document and will require ongoing review and updates to complete planned capital, marketing, and maintenance projects successfully.
- Updated SBP 2020 Tables 14 Capital Improvement Plan, Table 15 Project Opportunities, and Table 17 Action Plan with the most recent information.
- Draft SBP 2021 Tables 14 Capital Improvement Plan, Table 15 Project Opportunities, and Table 17 Action Plan with the latest infrastructure repair needs and projects.
- Draft SBP 2021 Project Opportunities Map with revised areas.
- Port estimated totals for all projects is \$22,942,000. Out of that amount, if grants were used to finance the projects, the estimated matching amount would be \$4,237,500. As of November 2, the Port has \$200,917 in reserves and \$377,288 general unrestricted cash.
- The Port currently has two projects ready to begin next year. The RV Park using \$657,000 from the restricted Port Construction Fund and the FEMA DR-4432 & DR-4452 projects totaling almost \$4 million. A third project could happen next year if federal funding comes through, for the wastewater treatment plant at \$3.5 million.

## DOCUMENTS

- Updated SBP 2020 Tables 14 Capital Improvement Plan, Table 15 Project Opportunities, and Table 17 Action Plan, 3 pages
- Draft SBP 2021 Tables 14 Capital Improvement Plan, Table 15 Project Opportunities, and Table 17 Action Plan, 10 pages
- Draft SBP 2021 Project Opportunities Map, 3 pages

## COMMISSIONERS ACTIONS

- **Recommended Motion:**  
Motion to approve Strategic Business Plan 2021 annual review and updated Tables 14, 15, 17 and project opportunities map.

**6.1 Capital Facilities Plan.** The Port has identified short-, mid-, and long-term capital improvement projects to facilitate the continued success of its operations and facilities. Table 14 lists potential projects, their timeframes, and planning level cost estimates for them.

**Table 14 - Capital Improvement Plan**

		Capital Improvements	2019 Cost Estimates	Timeline	2020 Priority	Fund Source	Priority Project Category
1	Fuel Dock Access Pad Replacement, Fuel Tank Site Restoration, Transient and Work Dock Repairs	Reconstruct marine fuel dock station & repair docks	\$600,000	2019-20	Extreme	State Lottery - Port	Commercial / Marina facility upgrade
<b>PROJECT COMPLETED</b>							
2	Basin 2 Embankment Repair - Reconstruction	Repair slopes to original conditions	\$775,000 to \$1,500,000	2021-22	Extreme	FEMA - HMAP - Port / Business Oregon	2019 Storm related damage
<b>PROJECT SCHEDULED TO BEGIN 2022</b>							
3	Basins 1 and 2 Dredging	Basins 1 and 2 dredging	\$1,000,000 to \$1,700,000	2021-22	Extreme	FEMA - HMAP - Port / Business Oregon	2019 Storm related damage
<b>PROJECT SCHEDULED TO BEGIN 2022</b>							
4	RV Park Facility Improvements	Demolish existing restroom shower facility, laundromat foundation; construct new laundromat, showers and restroom; construct new utility sites & upgrade electrical	\$700,000	2020-21	Extreme	Port Private Bank Loan	Recreation Improvements / public amenities
<b>PROJECT SCHEDULED FEB - APRIL 2022</b>							
5	Wastewater Treatment Plant	Construct wastewater treatment plant for Port industrial and commercial facilities	\$2,225,000 to \$5,000,000	2023	High	USDA Rural Grant / Port / Curry County / Grants	Commercial facility upgrade
<b>POSSIBLE FEDERAL FUNDING IN 2022</b>							
6	Stormwater Drainage and Paving Zones 1 Commercial Storage Area	Stormwater Improvements; grading, paving and curbs	\$2,500,000	2025	High	NHMP - PDM / Port	Commercial facility upgrade
<b>INCLUDED IN FEMA PROJECTS IN 2022</b>							
7	Receiving Docks	Demolish existing timber docks and concrete bulkhead; construct new concrete docks; install concrete pavement, install storm drainage facilities.	\$2,500,000	2025	High	NHMP - PDM / Port	Commercial facility upgrade
<b>INCLUDED IN FEMA PROJECTS IN 2022</b>							
8	Stormwater Drainage and Paving Basin 2 East Parking Area	Stormwater improvements; grind / overlay parking lot curbs; striping	\$1,000,000	2025	Medium	NHMP - PDM / Port	Commercial facility upgrade / public amenities
<b>INCLUDED IN FEMA PROJECTS IN 2022</b>							
9	Stormwater Drainage and Paving Basin 2 West Parking Lot and RV Park	Stormwater improvements; grind / overlay parking lot curbs; striping	\$1,000,000	2026	Medium	NHMP - PDM / Port	Commercial facility upgrade / public amenities
<b>INCLUDED IN FEMA PROJECTS IN 2022</b>							
10	Green Building Area	Develop site for covered storage units for all types of equipment, gear, vessels, vehicles, etc.	\$1,000,000	2026	Medium	Port	Commercial facility upgrade
11	RV Park Protection Wall	Install protective seawall	\$500,000	2026	Medium	NHMP - PDM / Port / Grant	Recreation improvements / public amenities
12	Boardwalk Expansion / Replacement	Repair / restore piling; secure slope; replace wood planks with concrete surface	\$292,500	2027	Medium	NHMP - PDM / Port	Marina facility upgrade / public amenities
13	Basin 2 Docks	Replace old docks from C thru H and N thru P; reconfigure spaces to accommodate larger vessel;	\$2,500,000	2030	Medium	Port - Grants	Commercial / Marina facility upgrade
14	Commercial Center Upgrade	Commercial building and site repairs or building third retail building	\$1,500,000	2030	Medium	Port - Grants	Commercial facility upgrade / public amenities
15	Development Potential of Port Bare Ground	Examine opportunity site for potential development - hotel / condo / business center		2030	Low	Port - Grants	Public-private partnership opportunity

Cost estimates are based on similar projects in other locations and are not based on detailed engineering plans or analysis. Final engineering and construction costs may vary.

69

**6.1.1 Project Opportunities.** Table 15 is an overview of the Port's capital improvement and opportunity projects, and includes brief project descriptions, existing zoning designation, and potential conflicts with land use and development regulations. Project locations are shown on the concept plan (Figure 4).

**Table 15 - Project Opportunities**

Table 14 Reference Number	Project and Description	Existing Zoning Designation	Potential Conflicts with Land Use and/or Development Regulations
1	Fuel Dock Access Pad Replacement, Fuel Tank Site Restoration, Transient and Work Dock Repairs	C-1	Permitted use; County, State and Federal permits needed for repairs and In-Water Work.
4	RV Park Facility Improvements - new restroom, laundry buildings, additional full-bath sites and electrical upgrade	C-1	No zoning conflicts anticipated; County permits will be required.
5	Port and/or Harbor Wastewater Treatment Plant	C-1	Zone change may be required; County, State and Federal permits needed for development and In-Water Work
7	Receiving Dock Upgrades - repair existing receiving docks and relocate Ice House	C-1	Permitted use; County, State and Federal permits needed for repairs and In-Water Work.
6, 8 - 10	Green Building & Gear Storage - stormwater drainage, utility relocation, street and paving improvements, self-storage units development	C-1 and I	No zoning conflicts anticipated; SHPO permits may be required; County permits will be required
12	Boardwalk Expansion / Repair - repair damage boardwalk and expand entire length of Basin 1 towards Zola's on the Water	C-1	Permitted use; County, State and Federal permits needed for repairs and In-Water Work.
14	Commercial / Retail / Event Center Expansion - build third building at existing retail facility, demolish and/or remove manufactured buildings	C-1	Retail and Service establishments are permitted uses; no conflicts anticipated; County permits will be required
15	Professional / Sheriff Substation / Port Offices - develop vacant land across Lower Harbor Road for business, County and Port offices	C-1	No zoning conflicts anticipated; County permits will be required
	Ongoing Dredging - initial dredging to be coordinated with FEMA, maintenance dredging coordinated with Business Oregon	C-1 and I	Permitted use; County, State and Federal permits needed for In-Water Work

The Marine Activity (MA) zoning designation in Curry County would be a more appropriate zoning designation for the marina and support facilities. Permitted uses in the MA zone include, but are not limited to, boat launch and moorage facilities, marine fuel storage and sales, fish processing facilities, public watercraft access facilities, boat service, repair and storage, and dredging. A zone change request should be considered in conjunction with capital improvement projects that require other permits/approvals.

Strategy 1.1.7: Continue to promote the Port to West Coast markets in Oregon, California, and where appropriate beyond to increase visitation, capture industrial users, and optimize facility use.

**7.0 Implementation and Action Plan.** The Port's strategic business plan is designed to be a working document and will require ongoing review and updates to complete the planned capital, marketing, and maintenance projects successfully. Table 17 sets out an action plan for the Port's identified short-, mid-, and long-term projects. This action plan will be updated annually.

**Table 17 - Action Plan**

Project	Timeline	Priority	Potential Funding Sources	Action Plan
1 Fuel Dock Access Pad Replacement and Restoration; Transient and Work Dock Repairs	1 - Year	Extreme	Business Oregon - Lottery Funds	Contractor selected, waiting for In-Water Work period Oct thru Feb to complete project
2 Basin 2 West, South and East Embankment Repair - Reconstruction	1 - Year	Extreme	FEMA - Port - Business Oregon	FEMA approval; Bid Package development, permitting requirements with County, State and Federal agencies
3 Basins 1 and 2 Dredging	1 - Year	Extreme	FEMA - Port - Business Oregon	FEMA Approval; Bid Package development, permitting requirements with County, State and Federal agencies
4 RV Park Facility Improvements	1 - Year	Extreme	Port Private Bank Loan	Bid Package development, permitting requirements with County, State and Federal agencies
5 Wastewater Treatment Plant	1 - 5 years	High	USDA Rural Grant (Port / County / Grants)	Identify funding sources for engineering and construction, obtaining permits from County, State and Federal agencies
6 Stormwater Drainage and Paving Commercial Storage Area (Infrastructure Upgrade)	1 - 5 Years	High	Port - Business Oregon	DEQ stormwater testing for 2-years; tests results will determine direction of Commercial Storage Area. Identify required permits, obtain cost estimates for project development
7 Receiving Docks	1 - 5 Years	High	Port - Private Investment - Business Oregon	Work with existing tenants and identify potential upgrades; obtaining permits from County, State and Federal agencies
8 Stormwater Drainage and Paving Basin 2 East Parking Area	1 - 5 Years	Medium	Port	Identify funding sources for engineering and construction
9 Stormwater Drainage and Paving Basin 2 West Parking Lot	1 - 5 Years	Medium	Port	Identify funding sources for engineering and construction
10 Stormwater Drainage and Paving RV Park	1 - 5 Years	Medium	Port	Identify funding sources for engineering and construction
11 Green Building Area	5 - 10 Years	Medium	Port - Business Oregon - Grant	Identify funding sources for engineering and construction; obtaining permits from County, State and Federal agencies
12 RV Park Protection Wall	5 - 10 Years	Medium	Port - Business Oregon - Grant	Identify funding sources for engineering and construction; obtaining permits from County, State and Federal agencies
13 Basin 2	5 - 10 Years	Medium	Port - Business Oregon - Grant	Identify funding sources for engineering and construction; obtaining permits from County, State and Federal agencies
14 Boardwalk Expansion / Replacement	5 - 10 Years	Medium	Port - Business Oregon - Grant	Identify funding sources for engineering and construction; obtaining permits from County, State and Federal agencies
15 Commercial Center Upgrade	5 - 10 Years	Low	Port - Business Oregon - Grant	Identify funding sources for engineering and construction; obtaining permits from County, State and Federal agencies
16 Development Potential of Port Bare Ground	5 - 10 Years	Low	Port - Private Investment - Business Oregon - Grants	Identify funding sources for engineering and construction; obtaining permits from County, State and Federal agencies

Additional potential grant sources include: the Department of Land Conservation and Development Technical Assistance Program, and Infrastructure Finance Authority Port Planning and Marketing Fund; the Economic Development Administration (EDA) Public Work and Economic Adjustment Program; EDA Planning and Technical Assistance Program; and the US Department of Transportation INFRA (Transportation Investment Generating Economic Recovery) grants. INFRA grants are highly competitive for road, rail, transit and port projects that achieve national objectives.

**6.1 Capital Facilities Plan.** The Port has identified short-, mid-, and long-term capital improvement projects to facilitate the continued success of its operations and facilities. Table 14 lists potential projects, their timeframes, and planning level cost estimates for them.

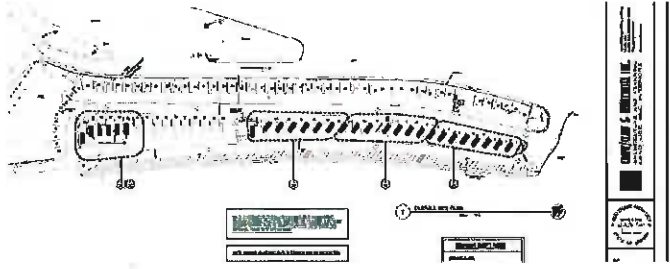


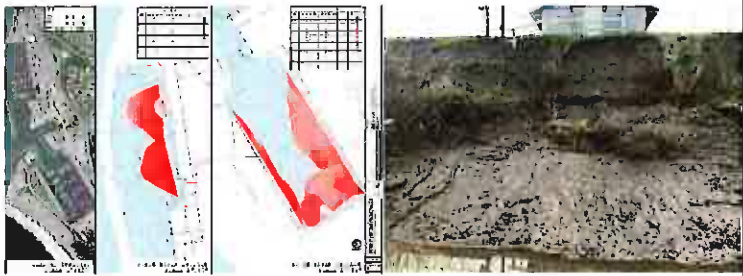
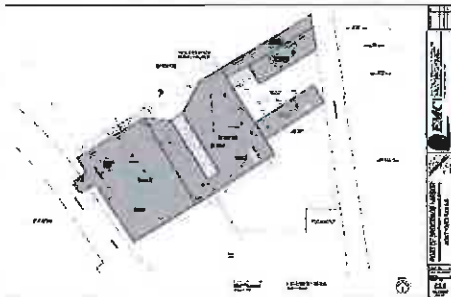
**Table 14 - Capital Improvement Plan**

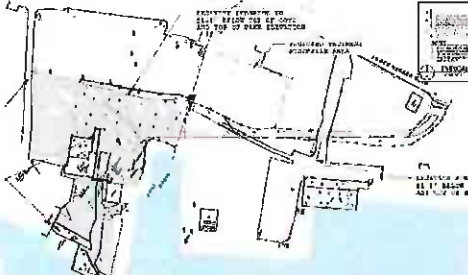




		Capital Improvements	2021 Cost Estimates	Timeline	2021-22 Priority	Fund Source	Priority Project Category
1	RV Park Facility Improvements	Front row RV site improvements	\$657,000	2021-22	High	Port	Recreation improvements / public amenities
2	Transient Dock Power Building	Rebuild transient dock power source supply	\$75,000	2022-23	High	Port	Marina facility upgrade
3	Wastewater Treatment Plant	Construct wastewater treatment plant for Port industrial and commercial facilities	\$3,500,000	2022-23	High	EPA / Port / Private	Commercial facility upgrade
4	Basins 1 and 2 Dredging & Basin 2 Slope Repair	Basins 1 and 2 dredging and Basin 2 slope repairs	\$1,700,000	2022-24	Extreme	FEMA - HMGP - Business Oregon	2019 Storm related damage
5	Stormwater Drainage and Paving Gear Storage, Boat Yard & Kite Field Areas	Stormwater improvements; grading and paving	\$2,000,000	2022-24	Extreme	FEMA - HMGP - Business Oregon	2019 Storm related damage
6	RV Park Facility Expansion on Kite Field (part of FEMA Projects above)	Develop utilities for RV camping	\$300,000	2022-24	High	Port	Recreation improvements / public amenities
7	RV Park Paving	Paving and stormwater improvements	\$500,000	2023-24	High	HMGP / OSPR / Port	Recreation improvements / public amenities
8	Retail Bld # 1 Roof Replacement	Retail Bld # 1 Roof Replacement	\$80,000	2023-24	High	Port	Commercial facility upgrade
9	Boardwalk Repair	Repair / restore piling; secure slope	\$200,000	2023-24	High	HMGP / Port	Marina facility upgrade / public amenities
10	Basin 2 Docks / Transient Dock	Replace old docks P Dock and reconfigure spaces to accommodate larger vessels	\$600,000	2023-24	High	HMGP / Port	Commercial / Marina facility upgrade
11	Retail Bld # 2 Roof Replacement	Retail Bld # 2 Roof Replacement	\$80,000	2024-25	High	Port	Commercial facility upgrade
12	Basin 2 Docks	Replace old docks O Dock and reconfigure spaces to accommodate larger vessels	\$600,000	2024-25	High	HMGP / Port	Commercial / Marina facility upgrade
13	Travel Lift Ramp Replacement	Rebuild travel lift ramp	\$750,000	2025-26	Medium	HMGP / Port	Commercial / Marina facility upgrade
14	Basin 1 Slope Repairs	Basin 1 slope repairs	\$600,000	2025-26	Medium	HMGP / Port	Marina facility upgrade
15	Basin 2 Docks	Replace old docks N Dock	\$600,000	2025-26	Medium	HMGP / Port	Commercial / Marina facility upgrade
16	Transient Dock / Barge-Icehouse / Basin 2 Slopes	Transient dock and barge/icehouse slope repairs	\$500,000	2025-26	Low	HMGP / Port	Marina facility upgrade
17	RV Park Facility Improvements	Upgrade back-in site utilities and improvements	\$700,000	2025-26	Low	Port	Recreation improvements / public amenities
18	Receiving Docks - Hallmark	Demolish existing timber docks and concrete bulkhead; construct new concrete docks.	\$1,500,000	2025-26	Low	NHMP / Port	Commercial facility upgrade
19	Receiving Docks - Broken	Demolish existing timber docks and concrete bulkhead; construct new concrete docks.	\$1,500,000	2025-26	Low	HMGP / Port	Commercial facility upgrade
20	Receiving Docks - Pacific Seafood Old	Demolish existing timber docks and concrete bulkhead; construct new concrete docks.	\$750,000	2025-26	Low	HMGP / Port	Commercial facility upgrade
21	Basin 2 Stormwater and Paving - East Parking Area	Stormwater and paving improvements	\$250,000	2025-26	Low	Port - Grants	Commercial facility upgrade / public amenities
22	Green Building Area	Develop site for covered storage units for all types of equipment, gear, vessels, vehicles, etc.	\$1,000,000	2030-31	Low	Port - Grants	Commercial facility upgrade
23	RV Park Protection Wall	Install protective seawall	\$500,000	2030-31	Low	HMGP / Port	Recreation improvements / public amenities
24	Basin 2 Docks	Replace old docks from C thru H	\$1,500,000	2030-31	Low	Port - Grants	Commercial / Marina facility upgrade
25	Commercial Center Upgrade	Commercial building and site repairs or building third retail building	\$1,500,000	2030-31	Low	Port - Grants	Commercial facility upgrade / public amenities
26	Development Potential of Port Bare Ground	Examine opportunity site for potential development - hotel / condo / business center	\$1,000,000	2030-31	Low	Port - Grants	Public-private partnership opportunity

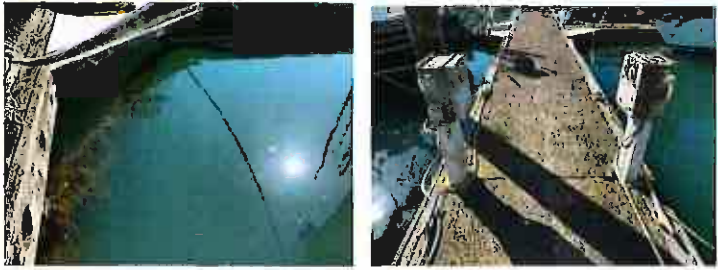


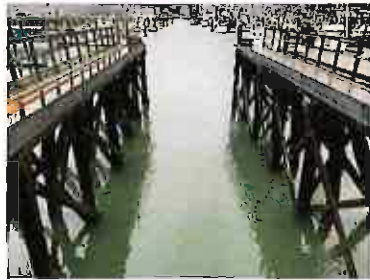
Cost estimates are based on similar projects in other locations and are not based on detailed engineering plans or analysis. Final engineering and construction costs may vary.




Estimate Total \$22,942,000












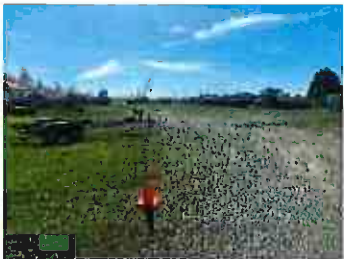



#	Description	
1	<p><b>RV Park Improvements</b></p> <p>Bidding process and selection of contractor is completed. Work is scheduled to begin Feb 2022.</p>	
2	<p><b>Transient Dock Power Building</b></p> <p>Existing building is made of wood. Temporary repairs to the wood were made. Rebuild the structure to withstand corrosion.</p>	
3	<p><b>Wastewater Treatment Plant</b></p> <p>Wastewater treatment plant to clean industrial wastes prior to discharge. Possible funding from Congressman DeFazio earmark.</p>	<p style="text-align: center;">Proposed Wastewater Treatment Plant Site</p> 
4	<p><b>Basin 1 &amp; 2 Dredging &amp; Basin 2 Slope Repairs</b></p> <p>FEMA DR-4432 &amp; DR-4452 repair projects. Basin 2 west and south slopes repair. Dredging approximately 38,000 cubic yards. Dredging equipment to be purchased and operated by port staff and used for future basin dredging.</p>	
5	<p><b>Stormwater Drainage and Paving Gear Storage, Boat Yard and Kite Field Areas</b></p> <p>FEMA DR-4432 &amp; DR-4452 mitigation repair projects. Infrastructure surrounding Basin 2 planned to be strengthened by grading, storm drainage and paving to reduce future storm related damages. Boat yard</p>	


	<p>grading, storm drains and paving. Gear storage grading, storm drains, road, and paving.</p>	
<p><b>6</b></p>	<p><b>RV Park Facility Expansion on Kite Field (part of FEMA Projects above)</b></p>	
	<p>FEMA DR-4432 &amp; DR-4452 mitigation work to improve infrastructure surrounding Basin 2 includes grading, storm drains and paving for a RV Park, but do not include utility installation or improvements. Utilities must be finance by Port.</p>	
<p><b>7</b></p>	<p><b>RV Park Paving</b></p>	
	<p>Installing stormwater drainage and either capping existing pavement or grinding and repaving or a combination of both on the existing roads. Over 500,000 vehicles use the road per year.</p>	
<p><b>8</b></p>	<p><b>Retail Building # 1 Roof Replacement</b></p>	
	<p>Every year we encounter leaks during storms. Remove roofing, repair wood rot, and reroof entire building. Complete work in two separate fiscal years to break up the expenses.</p>	
<p><b>9</b></p>	<p><b>Boardwalk Repair</b></p>	
	<p>Late 2018, the gap was 2.5". As of October 2021, the gap is 8" wide affecting 28-feet of the boardwalk. One solution is removing 30' of existing boardwalk, make repairs to shoring and slope, replace wood boardwalk.</p>	

10	<p><b>Basin 2 Docks (P-Dock)</b></p> <p>Original docks were installed in 1975. Docks were not built to house electrical cable and pedestals. Size of boats have become longer and wider than what the docks can handle. Typical lifespan for docks is 30 years. These docks are worn and undersized for the fleet currently using the harbor.</p>	
11	<p><b>Retail Building # 2 Roof Replacement</b></p> <p>Every year we encounter leaks during storms. Remove roofing, repair wood rot, and reroof entire building. Complete work in two separate fiscal years to break up the expenses.</p>	
12	<p><b>Basin 2 Docks (O-Dock)</b></p> <p>Original docks were installed in 1975. Docks were not built to house electrical cable and pedestals. Size of boats have become longer and wider than what the docks can handle. Typical lifespan for docks is 50 years. These docks are worn and undersized for the fleet currently using the harbor.</p>	
13	<p><b>Travel Lift Ramp Replacement</b></p> <p>Travel lift ramp was installed in late 1970's. Various timbers are rotting. Repairs have been made to address the rot. Typical lifespan of the ramp is 50 years. A new ramp should be designed to withstand corrosion and for larger vessel haul-outs.</p>	

<p><b>14</b></p>	<p><b>Basin 1 Slope Repairs</b></p> <p>Multiple areas throughout Basin 1 need slope repairs. Slope under the transient dock ramp next to the boat launch. Sections of slope between Zola's on the Water and existing boardwalk. Slope near main ramp to Docks A-D. Slope behind Pacific Seafood storage area.</p>	
<p><b>15</b></p>	<p><b>Basin 2 Docks (N-Dock)</b></p> <p>Original docks were installed in 1975. Docks were not built to house electrical cable and pedestals. Size of boats have become longer and wider than what the docks can handle. Typical lifespan for docks is 50 years. These docks are worn and undersized for the fleet currently using the harbor.</p>	
<p><b>16</b></p>	<p><b>Transient Dock / Barge-Icehouse / Basin 2 Slopes</b></p> <p>Transient dock slopes have lost the rock armoring. Shoring and slopes along the icehouse are crumbling. Basin 2 east slopes have lost most of the rock armoring with areas of the slope cave in. Slopes will need to be addressed as deterioration continues.</p>	

17	<p><b>RV Park Facility Improvements</b></p> <p>Upgrade back-in sites with new electrical system, concrete pads and possible realignment of sites due to county right-of-way of Boat Basin Road.</p>		
18	<p><b>Receiving Docks – Hallmark</b></p> <p>Concrete deck and piles are in decline. New piles and deck should be planned.</p>		
19	<p><b>Receiving Docks – Broken</b></p> <p>Concrete deck, subgrade and piles are broken. New piles and deck should be planned.</p>		
20	<p><b>Receiving Docks – Pacific Seafood (Old Dock)</b></p> <p>Concrete deck and piles are in decline. New piles and deck should be planned.</p>		
21	<p><b>Basin 2 Stormwater and Paving – East Parking Lot</b></p> <p>Pavement in the parking lot is very old. Capping or grinding and paving should be done with new stormwater catch basins.</p>		

22	<p><b>Green Building Area</b></p> <p>Develop area for covered storage buildings. Site is currently used for boat storage. Near future use could be used for crab pot storage.</p>	
23	<p><b>RV Park Protection Wall</b></p> <p>Board approved a seawall when funding becomes available. Temporary block seawall was installed to provide protection in the meantime.</p>	
24	<p><b>Basin 2 Docks (C thru H)</b></p> <p>Original docks were installed in 1975. Docks are old and worn out.</p>	
25	<p><b>Commercial Center Upgrade</b></p>	

26	<b>Development Potential of Port Bare Ground</b>	 <p>The table contains three photographs. The top-left and top-right photos show a wide, flat, light-colored area of bare ground, possibly a port or industrial site, with some buildings and trees in the background under a clear blue sky. The bottom-left photo shows a paved area, likely a parking lot or road, with white lines and a tall pole, surrounded by trees and a clear sky.</p>
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**6.1.1 Project Opportunities.** Table 15 is an overview of the Port's capital improvement and opportunity projects, and includes brief project descriptions, existing zoning designation, and potential conflicts with land use and development regulations. Project locations are shown on the concept plan (Figure 4).

**Table 15 - Project Opportunities**

Table 14 Reference Number	Project and Description	Existing Zoning Designation	Potential Conflicts with Land Use and/or Development Regulations
1	RV Park Facility Improvements, additional pull-thru sites, electrical upgrade & remodel sites	C-1	No zoning conflicts anticipated; County permits will be required
2	Transient Dock Power Building	C-1	No zoning conflicts anticipated; County permits will be required
3	Wastewater Treatment Plant	C-1	Zone change may be required; County, State and Federal permits needed for development and In-Water Work
4 & 5	Basin 1 & 2 Dredging / Basin 2 Slope Repairs under FEMA, Ongoing Dredging using equipment from FEMA, stormwater & paving improvements	C-1 and I	Permitted use; County, State and Federal permits needed for In-Water Work.
6	RV Park Facility Expansion on Kite Field (part of FEMA Projects above)	C-1	No zoning conflicts anticipated; County permits will be required
7	RV Park Paving & Stormwater Improvements	C-1	No zoning conflicts anticipated; County permits will be required
8 & 11	Retail Bld # 1 & 2 Roof Replacement / Repairs	C-1	No zoning conflicts anticipated; County permits will be required
9	Boardwalk Repair	C-1	Permitted use; County, State and Federal permits needed for repairs and In-Water Work.
10, 12, 15 & 24	Basin 2 Docks / Transient Dock	C-1	Permitted use; County, State and Federal permits needed for repairs and In-Water Work.
13	Travel Lift Ramp Replacement	C-1	Permitted use; County, State and Federal permits needed for repairs and In-Water Work.
16	Transient Dock - Barge & Icehouse Slopes / Basin 1 Slope Repairs	C-1	Permitted use; County, State and Federal permits needed for repairs and In-Water Work.
17 & 23	RV Park Facility Improvements - Seawall & Back-in Sites	C-1	No zoning conflicts anticipated; County permits will be required
18, 19 & 20	Receiving Dock Upgrades - repair existing receiving docks and relocate Ice House	C-1	Permitted use; County, State and Federal permits needed for repairs and In-Water Work.
22	Green Building & Gear Storage - self-storage units development	C-1 and I	No zoning conflicts anticipated; SHPO permits may be required; County permits will be required
25	Commercial / Retail / Event Center Expansion - build third building at existing retail facility, demolish and/or remove manufactured buildings	C-1	Retail and Service establishments are permitted uses; no conflicts anticipated; County permits will be required
26	Professional / Sheriff Substation / Port Offices - develop vacant land across Lower Harbor Road for business, County and Port offices	C-1	No zoning conflicts anticipated; County permits will be required

The Marine Activity (MA) zoning designation in Curry County would be a more appropriate zoning designation for the marina and support facilities. Permitted uses in the MA zone include, but are not limited to, boat launch and moorage facilities, marine fuel storage and sales, fish processing facilities, public watercraft access facilities, boat service, repair and storage, and dredging. A zone change request should be considered in conjunction with capital improvement projects that require other permits/approvals.



Strategy 1.1.7: Continue to promote the Port to West Coast markets in Oregon, California, and where appropriate beyond to increase visitation, capture industrial users, and optimize facility use.

**7.0 Implementation and Action Plan.** The Port's strategic business plan is designed to be a working document and will require ongoing review and updates to complete the planned capital, marketing, and maintenance projects successfully. Table 17 sets out an action plan for the Port's identified short-, mid-, and long-term projects. This action plan will be updated annually.

**Table 17 - Action Plan**

Project	Timeline	Priority	Potential Funding Sources	Action Plan
1 RV Park Facility Improvements	1 - Year	Ongoing	Port Private Bank Loan	Contractor selected, scheduled to begin construction Feb 2022
2 Basin 2 Embankment Repair	1 - Year	Ongoing	FEMA - Business Oregon	FEMA approval; Bid Package development, permitting requirements with County, State and Federal agencies; contractor selection
3 Basins 1 and 2 Dredging	1 - Year	Ongoing	FEMA - Business Oregon	FEMA approval; Bid Package development, permitting requirements with County, State and Federal agencies; contractor selection
4 Wastewater Treatment Plant	1 - Year	High	EPA / Port / Private	Federal funding pending; 20% Matching; obtaining permits from County, State and Federal agencies; Supplier & Contractor Procurements
5 RV Park Facility Expansion on Kite Field (part of FEMA Projects above)	1 - 2 Years	High	Port	Funding from General Fund, engineering & drawings, contractor selection and obtaining permits from County for Utilities
6 Transient Dock Power Building	1 - 2 Years	High	Port	Funding from General Fund, engineering & drawings, contractor selection and obtaining permits from County
7 Retail Buildings # 1 & 2 Roof Replacements	1 - 2 Years	High	Port	Funding from General Fund, contractor selection and obtaining permits from County; split work between two funding periods
8 Stormwater Drainage and Paving RV Park	1 - 2 Years	High	Port - OSPR - Grants	Identify funding sources for engineering and construction
9 Boardwalk Repair	1 - 2 Years	High	Port - HMGP - Grants	Identify funding sources for engineering and construction; obtaining permits from County, State and Federal agencies
10 Basin 2 Docks / Transient Dock	1 - 5 Years	Medium	Port - HMGP - Grants	Identify funding sources for engineering and construction; obtaining permits from County, State and Federal agencies; split work into phases
11 Travel Lift Ramp Replacement	1 - 5 Years	Medium	Port - HMGP - Grants	Identify funding sources for engineering and construction
12 Basin 1 Slope Repairs	1 - 5 Years	Medium	Port - HMGP - Grants	Identify funding sources for engineering and construction
13 RV Park Facility Improvements	5 - 10 Years	Low	Port	Identify funding sources for engineering and construction
14 Stormwater Drainage and Paving Basin 2 East Parking Area	5 - 10 Years	Low	Port	Identify funding sources for engineering and construction
15 Transient Dock Slopes / Barge-Icehouse Slopes / Basin 1 East Slopes	5 - 10 Years	Low	Port - HMGP - Grants	Identify funding sources for engineering and construction
16 Receiving Docks	5 - 10 Years	Low	Port - Private Investment - HMGP - Grants	Identify potential upgrades; obtaining permits from County, State and Federal agencies
17 Green Building Area	5 - 10 Years	Low	Port - Grant - Private Investment	Identify funding sources for engineering and construction; obtaining permits from County, State and Federal agencies
18 RV Park Protection Wall	5 - 10 Years	Low	Port - Grant	Identify funding sources for engineering and construction; obtaining permits from County, State and Federal agencies
19 Commercial Center Upgrade	5 - 10 Years	Low	Port - Business Oregon - Grant	Identify funding sources for engineering and construction; obtaining permits from County, State and Federal agencies
20 Development Potential of Port Bare Ground	5 - 10 Years	Low	Port - Private Investment - Business Oregon - Grants	Identify funding sources for engineering and construction; obtaining permits from County, State and Federal agencies

Additional potential grant sources include: the Department of Land Conservation and Development Technical Assistance Program, and Infrastructure Finance Authority Port Planning and Marketing Fund; the Economic Development Administration (EDA) Public Work and Economic Adjustment Program; EDA Planning and Technical Assistance Program; and the US Department of Transportation (Transportation Investment Generating Economic Recovery) grants. HMGP - FEMA Hazard Mitigation Grant Program, OSPR - Oregon State Parks & Recreation.

- |  |   |                                     |                                  |
|--|---|-------------------------------------|----------------------------------|
| 1 Third Retail / Professional Building     | 5 Self-Storage Buildings                      | 9 Boat Yard Upgrade                 | --- Pedestrian Sidewalks         |
| 2 Professional / Sheriff / Port Offices    | 6 Receiving Dock Upgrades / Relocate Icehouse | 10 RV Park Expansion                | Round-Abouts Entryways           |
| 3 Boardwalk Expansion                      | 7 Port Wastewater Treatment Plant             | 11 RV Park Development/Improvements | Roads / Utility Easements        |
| 4 Public Parking / Boat Rinse / Playground | 8 Sediment Basin                              | Facility Upgrades                   | Public / Private Partnership     |
|  |   | Public Amenities                    | Commercial / Marine Improvements |



## Port of Brookings Harbor – Project Opportunities

Curry County, Oregon | Concept Plan – Figure 4 | November 2021. DRAFT



## Map Summary

Completing the sidewalk along Lower Harbor Road would provide better public access and enhance the look for the Port and community.

Building internal roads would be essential for future development of Port property. The roads would allow for easements to contain the utility (water, power, sewer, gas, communication, etc.) infrastructure needed for the development and access to the new and existing facilities. The roads and utility infrastructure should be completed prior to any site developments in these areas.

A round-about intersection could help with access into the boat launch parking lot and could provide a safer intersection. A new Port sign could be placed in the center of the round-about. This also would as fall in line with the original plan for a Port Entryway.

### 1 Third Retail / Professional Building

Keeping the original plan to expand the retail space with a third retail building, but this building could be designed to include a convention center with restaurants and retail space.

### 2 Professional / Sheriff / Port Offices

The land across Lower Harbor Road could be developed into professional offices, County Sheriff Substation and Port Office or other private business venture.

### 3 Boardwalk Expansion

Keeping the original plan for increasing public amenities. Repairing the existing boardwalk could be completed at the same time while extending the boardwalk to cover the entire Basin.

### 4 Public Parking / Boat Rinse / Playground

Existing Boat Shop was relocated into the Boat Yard warehouse and leasing building and ground space for boat repairs. Port Shop and operations moved into Boat Shop. Public amenities including new boat rinse could be located in a reduced area. Approximately 1 acre.

### 5 Self-Storage Buildings

Self-Storage Buildings with a wide variety of uses. Boat/trailer, crab pots, RV's, etc. Approximately 5.5 acres.

6 Receiving Dock Upgrades / Relocate Icehouse

Receiving Dock Upgrades / Relocation of Icehouse – repair damaged receiving docks. Pave surfaces for employee parking, equipment gear staging and product transportation.

7 Port Wastewater Treatment Plant

Port wastewater treatment plant location with adjacent sediment basin would provide the necessary infrastructure to secure the longevity of the fish processing plant lease and maintaining basins navigation depths. Approximately 2 acres.

8 Sediment Basin

Sediment basin would provide the necessary disposal area that is essential to the dredging operation.

9 Boat Yard Upgrade

FEMA mitigation planning includes storm drain improvements and paving. Rebuilding the travel lift ramp would also be needed.

10 RV Park Expansion

FEMA mitigation planning includes this area for dredge disposal and encapsulation creating the foundation for RV Park expansion. Utility improvements would be required to fully develop the expansion. Approximately 2.3 acres

11 RV Park Development / Improvements

RV Park improvements for the front row sites are planned in spring 2022. Other improvements include paving, back-in site upgrades and fencing.

## ACTION ITEM – J

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**DATE:** November 17, 2021

**RE:** Business Oregon General Application Special Public Works Fund, FEMA DR-4432 Mitigation and Repair

**TO:** Honorable Board President and District Board Members

**ISSUED BY:** Gary Dehlinger, Port Manager

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### OVERVIEW

- A severe storm occurred on February 24, 2019 causing enough damage in Curry County and to the Port to activate FEMA disaster relief protocol for which the Port submitted storm damage to Basin 2 slopes and approximately 8,000 cubic yards of dredging. FEMA 406 Mitigation measures will reinforce existing infrastructure to reduce future storm related damages to Port facilities.
- FEMA disaster relief requires 25% matching from the applicant for the repair and mitigation costs. The Port does not have the funds required for the 25% matching.
- Business Oregon Special Public Works Fund provides matching amounts for disaster relief repair and mitigation projects. The matching amount for this repair and mitigation is \$474,732.
- Business Oregon provided a General Application for Special Works Fund, FEMA DR-4432 Mitigation and Repair, #648-14634 for the matching funds.
- The General Application requires the Board to approve the signature to submit the application.
- Resolution 2021-13 provides the documentation needed to authorize the Board President to sign and submit the application on the behalf of the Port of Brookings Harbor.
- Port legal counsel and EMC Engineers/Scientist have reviewed the documents.

### DOCUMENTS

- Draft Resolution 2021-13 Authorizing Submission of Business Oregon General Application for Special Public Works Fund, FEMA DR-4432 Mitigation and Repair, #648-14634, 1 page
- Business Oregon General Application SPWF, FEMA DR-4432 Mitigation and Repair, #648-14634, 129 pages

### COMMISSIONERS ACTIONS

- **Recommended Motion:**  
Motion to approve the draft Resolution 2021-13 Authorizing Submission of Business Oregon General Application for Special Public Works Fund, FEMA DR-4432 Mitigation and Repair, #648-14634.

**PORT OF BROOKINGS HARBOR  
CURRY COUNTY, OREGON**

**RESOLUTION NO. 2021-13**

**A RESOLUTION OF THE BOARD OF PORT COMMISSIONERS FOR THE PORT OF  
BROOKINGS HARBOR AUTHORIZING SUBMISSION OF BUSINESS OREGON  
GENERAL APPLICATION FOR SPECIAL PUBLIC WORKS FUND, FEMA DR-4432  
MITIGATION AND REPAIR, #648-14634**

**WHEREAS**, the Port of Brookings Harbor is a port district, organized and operated under the provisions of ORS Chapter 777, and has the authority to adopt resolutions; and

**WHEREAS**, a severe storm occurred on February 24, 2019 causing enough damage in Curry County and to the Port to activate FEMA disaster relief protocol for which the Port submitted storm damage to Basin 2 slopes and approximately 8,000 cubic yards of dredging. FEMA 406 Mitigation measures will reinforce existing infrastructure to reduce future storm related damages to Port facilities; and

**WHEREAS**, FEMA disaster relief requires 25% matching from the applicant for the repair and mitigation costs. The Port does not have the funds required for the 25% matching.; and

**WHEREAS**, Business Oregon Special Public Works Fund provides matching amounts for disaster relief repair and mitigation projects.

**NOW, THEREFORE**, be it resolved by the Board of Commissioners of the Port of Brookings Harbor, Curry County, Oregon as follows:

1. The Port of Brookings Harbor Board of Commissioners authorizes the Board President, Richard Heap, to sign and submit on the behalf of the Port of Brookings Harbor, Business Oregon General Application for Special Works Fund, FEMA DR-4432 Mitigation and Repair, #648-14634.

**APPROVED AND ADOPTED** and made effective the same day by the Board of Port Commissioners of the Port of Brookings Harbor this 17th day of November, 2021.

**ATTEST:**

\_\_\_\_\_  
Richard Heap, President

\_\_\_\_\_  
Sharon Hartung, Secretary/Treasurer



November 9, 2021

Richard Heap, President  
Port of Brookings Harbor  
16330 Lower Harbor Rd.  
PO Box 848  
Brookings, Oregon, 97415

RE: Invitation to Apply for Special Public Works Fund, FEMA DR-4432 Mitigation and Repair,  
#648-14634

Dear Richard:

Business Oregon is pleased to invite you to submit an application for funding for the above referenced project.

Please submit the enclosed Application and the Application Supplement form(s) to our office.

We request that you complete the Application and Application Supplement within 45 days of receiving this letter.

Should you have any questions, please contact me at 503-779-3221 or e-mail to: [Ted.Werth@oregon.gov](mailto:Ted.Werth@oregon.gov) I will be your Business Oregon point of contact for this project moving forward.

Sincerely,

*Ted Werth*

Ted Werth, Regional Project Manager  
Business Oregon

Enclosures

c: Gary Dehlinger  
File

## General Application

775 Summer St NE, Suite 200  
Salem, OR 97301-1280

### Applicant

Port of Brookings Harbor  
Name

93-6013807  
Federal Tax ID Number

16330 Lower Harbor Road, Brookings, OR  
97415

P.O. Box 848, Brookings, OR 97415  
Mailing Address

Street Address

Organization Type:

City     County     Special District under  
ORS \_\_\_\_\_     Port District under  
ORS 777     Tribe

Gary Dehlinger  
Contact Name  
(Person we should contact with project questions)

Port Manager  
Title

541-254-4162  
Phone Number

541-359-3999  
Fax Number

portmanager@portofbrookingshar  
bor.com  
Email Address

**Representation** (Information may be found at [www.leg.state.or.us/findlegsltr](http://www.leg.state.or.us/findlegsltr) )

01  
Senate District Number

Dallas Heard  
Senator's Name

01  
House District Number

David Brock Smith  
Representative's Name

### Project Information

FEMA DR-4432 Mitigation & Repair, #648-14634  
Project Name: (e.g., Stayton Water System Improvements)



**Opportunity/Problem**

Briefly describe the opportunity or problem facing the applicant:

A severe storm occurred on February 24, 2019 causing enough damage in Curry County and to the Port to activate FEMA disaster relief protocol for which the Port submitted storm damage to Basin 2 slopes and approximately 8,000 cubic yards of dredging. FEMA 406 Mitigation measures will reinforce existing infrastructure to reduce future storm related damages to Port facilities. FEMA disaster relief requires 25% matching from the applicant for the repair and mitigation costs. The Port does not have the funds required for the 25% matching.

**Response to Opportunity/Problem**

Briefly describe the major alternatives considered to address this opportunity or problem:

The Port would need to seek private loans for the required 25% matching and cause further debt issues.

**Detailed Project Description**

Clearly describe the proposed project work to be accomplished:

Please see Attachment "B" report from EMC Engineers/Scientists dated 5/16/2021.

**Project Work Plan**

List project activity milestones with estimated start and completion dates. Identify estimated date of first cash draw:

Activity	Estimated Date	
	Start	Completion
Joint Permit Applicant approved	Nov 1, 2021	Jan 1, 2022
Completion of construction drawings	Nov 1, 2021	Sep 1, 2022
Purchase of dredge, electric generator and piping	Jan 1, 2022	Sep 1, 2022
RFP to select project contractor	May 1, 2022	Jul 1, 2022
Grading and construction of the sediment storage area in the Commercial area	Jul 1, 2022	Sep 1, 2022
Dredging Basins 1 & 2	Oct 1, 2022	Mar 1, 2024
Basin 2 Slope Repairs	Oct 1, 2022	Mar 1, 2023
Mitigation Repairs	Mar 1, 2023	Jan 1, 2025

**Estimated First Draw Date:** Feb 1, 2022

**Project Budget**

List individual project budget line items with requested budgeted amounts by IFA and non-IFA funding sources. Change budget column labels to identify the specific requested IFA funding sources. Non-IFA sources are those funds other than those requested from IFA.

Please be aware that the award loan amount will be subject to a less than 1% issuance fee if the loan is included in the Oregon Bond Bank. Please contact Business Oregon for additional information.

Budget Line Item (Adjust budget items to suit the project) <i>Below are general items most used</i>	IFA Funding		Non-IFA	Total
	Source 1	Source 2	Funds	
Engineering/Architecture	\$0	\$0	\$0	\$0
Construction	474,732		1,424,196	1,898,928
Construction Contingency				0
Land Acquisition				0
Legal				0
Construction Management				0
Other (Specify)				0
Other (Specify)				0
Other (Specify)				0
Other (Specify)				0
<b>Totals</b>	<b>474,732</b>	<b>0</b>	<b>1,424,196</b>	<b>1,898,928</b>

**Note:** Attach Engineer's Cost Estimate completed within the past 6 months.

**Details of Non-IFA Funds**

Source of Non-IFA Funds	Amount	Status: C-Committed, A-Application S-Submitted, AI-Application Invited, PS-Potential Source	Dates Required Funds will be Committed and Available
FEMA/OEM	\$1,424,196	S	1-Jan-22
<b>Totals</b>	<b>1,424,196</b>		

If "Non-IFA funds" include USDA Rural Development funding that will require interim financing, please indicate the source of the interim financing.

**General Certification**

I certify to the best of my knowledge all information, contained in this document and any attached supplements, is valid and accurate. I further certify that, to the best of my knowledge:

1. The application has been approved by the governing body or is otherwise being submitted using the governing body's lawful process, and
2. Signature authority is verified.

**Check one:**

- Yes, I am the highest elected official. (e.g., Mayor, Chair or President)
- No, I am not the highest elected official so I have attached documentation that verifies my authority to sign on behalf of the applicant. (Document such as charter, resolution, ordinance or governing body meeting minutes must be attached.)

**The department will only accept applications with proper signature authority documentation.**

Signature	November 17, 2021
Richard Heap	Date
Printed Name	President
	Printed Title

**FOR BUSINESS OREGON USE ONLY**

Concept Number	Intake Approval Date
----------------	----------------------

**Project Type:**

- Planning                       Construction                       Other:
- Design                               Design & Construction

Applicant: **Port of Brookings Harbor**

Project Name: **FEMA DR-4432 Mitigation & Repair, #648-14634**

**Section I: Project Type / Acquisition / Ownership / Operation**

- A. Will the project provide the local match for an **emergency project** receiving federal disaster relief?  Yes  No  
*If yes, briefly describe the emergency project activities:* Dredging, Basin slope repair and mitigation measures.  
*Note: Attach copies of the FEMA approved "Project Worksheets" as Attachment A.*
- B. Will the project result in the restoration, rehabilitation or new construction of essential community facilities that provide support services to public health and safety, including but limited to police and fire protection, medical treatment, public utilities, transportation and auxiliary shelter facilities?  Yes  No  
*If yes, explain:*
- C. What is the physical location of the project?  
**16330 Lower Harbor Road and 16035 Boat Basin Road, Brookings, OR 97415**
- D. Will the applicant own the facility / improvements once constructed?  Yes  No  
*If no, explain:*
- E. Will the applicant operate and maintain the facility / improvements once constructed?  Yes  No  
*If no, describe:*
- F. Does the project include any acquisition of real property, including permanent easements and rights-of-way, which are directly related to or necessary for the project?  Yes  No  
*If yes, describe:*
- G. Does the project include the purchase of motor vehicles or any other equipment which is essential to the project?  Yes  No  
*If yes, describe:* **Remote control dredge, generator and discharge piping**
- H. Will a private entity or business have a special legal entitlement to the project? (e.g., through either a transfer of, or partnership in ownership, a lease, management contract, special user rates or development fees, or priority for use)  Yes  No  
*If yes, describe:*

**Section II: Additional Project Information**

A. What is the estimated useful life of the improvements included in the project?

**50-100 years**

B. Please list the permits and regulatory authorizations needed for the project to be ready to proceed with construction and indicate whether they have been obtained or not.

Permit Type	Review Agency	Status of Approval	If pending, anticipated approval date
Joint Permit Application	USACE & ODSL	<input type="checkbox"/> Obtained <input checked="" type="checkbox"/> Pending	Jan 1, 2022
		<input type="checkbox"/> Obtained <input type="checkbox"/> Pending	
		<input type="checkbox"/> Obtained <input type="checkbox"/> Pending	
		<input type="checkbox"/> Obtained <input type="checkbox"/> Pending	

**Section III: For Drinking Water System Improvement Projects Only**

A. Water system identification number:

**Section IV: Financial Information**

A. What sources of revenue can be pledged to repay a loan?

*Note: Loan funding for all or a portion of the requested local match may be necessary if funding requests for local match assistance exceeds the Emergency Project grant funds available.*

**Port's understanding, FEMA declared disaster matching from SPWF is not a loan.**

B. Is other debt serviced or secured by those revenues?  Yes  No

*If yes, is the other debt described in the applicant's audit reports?*  Yes  No

**If the other debt is not described in the audit report,** refer to the specific authorization, such as an ordinance or resolution. List below and attach a copy.

Lender	Amount of Note	Year Incurred

C. Has the applicant ever defaulted on a debt?  Yes  No

*If yes, provide a complete summary of the circumstances related to the default:*

- D. Is there actual/pending litigation that could impair the applicant's ability to repay debt?  Yes  No

*If yes, describe:*

**Section V: Budget Information**

- A. Does the project budget (as included on the General Application) propose direct project management expenses?  Yes  No

*(Direct project management is defined as expenses that will be incurred that are directly related to and necessary solely to support or manage project activities and are not routine or ongoing expenses of the municipality or expenses for current staff that are already included in the municipality's adopted budget. )*

*If yes, describe how the direct project management services will be provided:*

- B. A current engineer's cost estimate must be included as **Attachment G**. Who prepared the cost estimates for the project?

***Note:** To be considered current, the cost estimate must have been completed within the past 6 months.*

Name: **Jack Akin**

Title: **Owner**

Company: **EMC Engineers/Scientists, LLC**

Phone Number: **541-474-9434**

Date of project cost estimate: **May 16, 2021**

## Attachments

	Attachment Description	For IFA Use (X Attached?)
<b>Required with all applications</b>	<b>A</b> Attach a copy of the FEMA approved "Project Worksheet(s)" that are the basis for this funding request.	<input type="checkbox"/>
	<b>B</b> Map(s) showing the location of the project, including tax lots / parcels and road widths, et cetera.	<input type="checkbox"/>
	<b>C</b> If the project overlaps municipal boundaries, attach an executed copy of an intergovernmental cooperation agreement that sets out the duties and obligations of each entity.	<input type="checkbox"/>
	<b>D</b> If the applicant will own the facility and another entity will operate the facility, attach an executed copy of the operating agreement between the parties.	<input type="checkbox"/>
	<b>E</b> If available, the plans and specifications for the project.	<input type="checkbox"/>
	<b>F</b> If available, the architectural / engineering / planning work or study conducted to determine the feasibility of the proposed repairs or other improvements. The documents must be certified by a professional architect / registered engineer licensed in Oregon.	<input type="checkbox"/>
	<b>G</b> Current engineer's cost estimate (see Section 5 B)	<input type="checkbox"/>



**304670 Harbor - Basins 1 and 2**

\*\*\*\*\*Version 1 Summary\*\*\*\*\*

Version 1 captures work to be completed and supersedes Version 0 SOW.

V1.1 Total volume of debris to be removed increased from 8,000 CY to 38,000 CY after detailed engineering analysis and transfer of project 110140 SOW to this project (see special note 1).

V1.2: Riprap replacement added to SOW as part of dredging work, determined necessary after detailed engineering analysis.

V1.3: Work to be completed costs have increased from \$972,299.00 to \$2,465,157.00 due to above changes.

V1.4: Include \$80,400 of transferred de-obligated funding from DR4452, project 110140.

\*\*\*\*\*

**Work to be Completed**

The applicant will utilize contracts for the repairs to harbor Basins 1 and 2 to return the facility back to its pre-disaster design, function and capacity within the existing footprint.

Basin 1 GPS: 42.047097, -124.266318 through 42.044543, -124.264013

Basin 2 GPS: 42.051155, -124.268378 through 42.050387, -124.268139

**Facility Damage**

1. Remove and dispose of 8,000 Cubic Yard of Sand/Soil/Mud debris from Basin 1.
2. Remove and dispose of 30,000 Cubic Yard of Sand/Soil/Mud debris from Basin 2.
3. Replace 1911 CY of riprap in Basin 2 :
  1. 542 CY of unclassified mixed riprap on East slope, 195 FT long x 5 FT wide x 15 FT deep
  2. 578 CY of unclassified mixed riprap on South Slope, 208 FT long x 5 FT wide x 15 FT deep
  3. 289 CY of unclassified mixed riprap on Transient Slope, 104 FT long x 5 FT wide x 15 FT deep
  4. 502 CY of unclassified mixed riprap on Basin 2 West Slope, 452 FT long x 5 FT wide x 6 FT deep

**Work to be Completed Total: \$2,465,157.00**

**Special Notes:**

1. The actual dredging work of this project is directly associated with the dredging work of Project #110140 of DR4452OR, therefore the Engineering Services include the composite design documents for both damages. The projects are not mutually exclusive (e.g. as the sediment of the first event DR4432 is

beneath the sediment of DR4452, it technically cannot be removed until the DR4452 sediment is removed), thus the need for a combined engineering program.

**Project Notes:**

1. All site estimates for work to be completed were generated using applicant provided estimates. See attachment labelled *ST 104046 Cost Validation.xlsx* and *ST 104046 Appendix A Cost Validation Checklist.pdf*
2. As engineering design evolved, total volume of debris has become more accurate and volume totals are now 38,000 CY for projects 104046 and 110140.
3. The updated SOW includes 1911 CY of replacement riprap, determined necessary after detailed engineering analysis
4. Applicant plans to use an in-house, small dredge system, utilizing the DragFlow DPR-120 remote controlled dredge, rigged with the EL 1204HH C Model pump system. See attached document *DR4432 & DR4452\_POBH\_Repairs, Mitigation, Exhibits DWGs and Budgets.pdf*, page 26.
5. The applicant is coordinating with US Army Corp of Engineers and Oregon Department of Public Lands regarding required permits. See attached document *DR4432\_DR4452\_Port of Brookings Harbor\_JPA\_071321.pdf*
6. All work will be completed within the applicants ROW. If staging of equipment and materials would be needed, that work will be staged within the applicants ROW.
7. Disposal of work to be completed is expected to be deposited at an acceptable location (landfill). Location will be provided by applicant once work commences.
8. All borrow, or fill must come from pre-existing stockpiles, material reclaimed from maintained roadside ditches (provided the designed width or depth of the ditch is not increased), or commercially procured material from a source existing prior to the event. For any FEMA-funded project requiring the use of a non-commercial source or a commercial source that was not permitted to operate prior to the event (e.g. a new pit, agricultural fields, road ROWs, etc.) in whole or in part, regardless of cost, the Applicant must notify FEMA and the Recipient prior to extracting material. FEMA must review the source for compliance with all applicable federal environmental planning and historic preservation laws and executive orders prior to a sub recipient or their contractor commencing borrow extraction. Consultation and regulatory permitting may be required. Non-compliance with this requirement may jeopardize receipt of federal funding. Documentation of borrow sources utilized is required at closeout.
9. Construction Date of Basin 1 is 1950s – 1960s, the construction date of Basin 2 is 1975 and the construction date of the Fuel Dock is 2004/2010.”
10. The EHP site inspection report uploaded to GM references major archeological concerns along east bank of Basin 1 and north of Basin 2 as well as some environmental concerns.
11. This project was moved to category G and qualifies for hazard mitigation funding, however the DI is still listed as category A thus this SOW is implementing an agreed-upon work-around to include the proposed Hazard Mitigation Proposal (HMP). See below.

**Hazard Mitigation Proposal (HMP)**

**GM Project # 104046**

**DI #: 304670**

**DR-4432- OR**

**HMP Date: 10/4/2021**

**Damage Description & Dimensions (DDD):**

**This permanent work project addresses dredging work and rip rap replacement following two storm events, with a total estimated repair cost of \$2,465,157. The damages occurred from the displacement of all of the materials from upslope during heavy precipitation and winter storm**

events. An engineering analysis (DR4432 & DR4452\_POBH\_Repairs, Mitigation, Exhibits DWGs and Budgets.pdf) was conducted to provide the details regarding the repairs needed and the proposed mitigation.

#### **Hazard Mitigation Proposal (HMP) Scope of Work**

For the purpose of erosion control to mitigate against future damages from similar events, the applicant has provided a detailed scope of work which includes resiliency measures upslope that are in keeping with Appendix J section I.B as well as a lesser cost method of repair for the damages their selves. This holistic approach of addressing the repairs and resiliency will result in mitigation that addresses the causes and source of the disaster related damages. See previously mentioned attachment for details.

#### **Hazard Mitigation Proposal (HMP) Cost:**

The applicant provided estimate for the mitigation is Exhibit C, found on page 11 of 105 within the engineering analysis. Due to the various approaches used in compartmentalizing the funding, the information on that estimate regarding where the funding could come from should be disregarded as no longer representing the best available information. The cost, designs, and items included remain valid. The cost of the proposed mitigation is derived previously noted attachments, for \$3,833,249. This mitigation will be performed in lieu of the predisaster repair. Therefore, the total additional cost needed for this mitigation is:  $\$3,833,249$  minus  $\$2,465,157$  =  $\$1,368,092$ .

#### **Hazard Mitigation Ratio:**

The estimated predisaster repairs (excluding engineering) is \$2,465,157. The proposed mitigation is \$1,368,092, or 55% of the repair costs.

#### **HMP Feasibility & Cost Effectiveness:**

This Hazard Mitigation Proposal is cost effective in accordance with the 100% Rule, FEMA Public Assistance Program and Policy Guide (PAPPG) V3.1 and Appendix J section I.B.

#### **Compliances and Assurances:**

The Applicant is responsible for permits and compliance with all regulatory codes and standards for the State of Oregon and contractors and vendors. FEMA will not pay for duplication of cost between repairs and mitigation measures. If this HMP is approved to change SOW, the Applicant must apply for a change in SOW so FEMA can review to ensure program compliance.

**portmanager@portofbrookingsharbor.com**

---

**From:** SLEVIN Julie \* OMD <julie.slevin@mil.state.or.us>  
**Sent:** Tuesday, October 19, 2021 9:22 AM  
**To:** 'Jack '; portmanager@portofbrookingsharbor.com  
**Cc:** GWIN Dan \* OMD  
**Subject:** FW: DR4432/4452 - POBH: DREDGING projects #104046 & 110140  
**Attachments:** DR4432-POBH Project#104046-V1 Dredging Amendment SOW.docx

FYI

**From:** WERTH Ted \* BIZ <Ted.Werth@oregon.gov>  
**Sent:** Monday, October 18, 2021 4:45 PM  
**To:** SLEVIN Julie \* OMD <julie.slevin@mil.state.or.us>  
**Subject:** Re: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Julie,

This is very helpful. I'll be in touch once I have a chance to look at this closer and discuss with the program manager who oversees SPWF program. It should be later this week.

Thanks,  
Ted

Ted Werth  
Regional Project Manager  
503-779-3221

---

**From:** SLEVIN Julie \* OMD <[julie.slevin@mil.state.or.us](mailto:julie.slevin@mil.state.or.us)>  
**Sent:** Monday, October 18, 2021 1:33:39 PM  
**To:** WERTH Ted \* BIZ <[Ted.Werth@oregon.gov](mailto:Ted.Werth@oregon.gov)>  
**Cc:** GWIN Dan \* OMD <[dan.gwin@mil.state.or.us](mailto:dan.gwin@mil.state.or.us)>  
**Subject:** FW: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Hi Ted, per our discussion, I think a couple of weeks ago, attached is the two projects into for Port of Brookings Harbor. Does this help with POBH grant limitations?

Please let me know if you have any questions,

Julie Slevin  
503.378.2235

**From:** Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>  
**Sent:** Monday, October 18, 2021 1:28 PM  
**To:** SLEVIN Julie \* OMD <[julie.slevin@mil.state.or.us](mailto:julie.slevin@mil.state.or.us)>  
**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Johnson III, Lawrence <[lawrence.johnsoniii@fema.dhs.gov](mailto:lawrence.johnsoniii@fema.dhs.gov)>; GWIN Dan \* OMD <[dan.gwin@mil.state.or.us](mailto:dan.gwin@mil.state.or.us)>; Gregory Jackson <[gjackson@acdisaster.com](mailto:gjackson@acdisaster.com)>; Lucas Pagan <[lpagan@acdisaster.com](mailto:lpagan@acdisaster.com)>; Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>; Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>;

Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>; Talbot, Jessica <[jessica.talbot@fema.dhs.gov](mailto:jessica.talbot@fema.dhs.gov)>

**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Hi Julie,

Attached is the updated/amended Scope-of-Work for project #104046, which describes the combined dredging work and mitigation measures of the merged projects. We trust this information will meet the requirements of OR Biz. If additional documentation is needed please let us know, at your earliest convenience. Thank you. .... Doug

Douglas C Grant  
PDMG – Public Assistance  
DR4432OR  
732-804-9239  
[Douglas.grant@fema.dhs.gov](mailto:Douglas.grant@fema.dhs.gov)

**From:** Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>

**Sent:** Thursday, September 16, 2021 2:47 PM

**To:** SLEVIN Julie \* OMD <[julie.slevin@mil.state.or.us](mailto:julie.slevin@mil.state.or.us)>; Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>; Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>; Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>

**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Johnson III, Lawrence <[lawrence.johnsoniii@fema.dhs.gov](mailto:lawrence.johnsoniii@fema.dhs.gov)>; GWIN Dan \* OMD <[dan.gwin@mil.state.or.us](mailto:dan.gwin@mil.state.or.us)>; Gregory Jackson <[gjackson@acdisaster.com](mailto:gjackson@acdisaster.com)>; Lucas Pagan <[lpagan@acdisaster.com](mailto:lpagan@acdisaster.com)>

**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Hi All,

Per my discussion with Julie S., I have approved the POBH Amendment Request for the Dredging projects. Business Oregon will need an explanation covering two projects consolidated into one so that the Applicant will be able to receive support from Biz Oregon in support of both.

Let me know if you have any questions.

Thank you.

L.

*Lee M. Marusin*

DR4519 OR PD TFL  
[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)  
FEMA Mobile 202-615-6193

**From:** SLEVIN Julie \* OMD <[julie.slevin@mil.state.or.us](mailto:julie.slevin@mil.state.or.us)>

**Sent:** Thursday, September 16, 2021 12:34 PM

**To:** Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>; Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>; Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>; Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>

**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Johnson III, Lawrence <[lawrence.johnsoniii@fema.dhs.gov](mailto:lawrence.johnsoniii@fema.dhs.gov)>; GWIN Dan \* OMD <[dan.gwin@mil.state.or.us](mailto:dan.gwin@mil.state.or.us)>; Gregory Jackson <[gjackson@acdisaster.com](mailto:gjackson@acdisaster.com)>; Lucas Pagan <[lpagan@acdisaster.com](mailto:lpagan@acdisaster.com)>

**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Hi Lee, all, do you have a write up for the scope of work that documents the combination of both projects combined into one? I just talked to OR Biz who is looking at funding the match for the Port, all OR Biz really needs is a description on

how two projects/two events have been combined into one project, this will document that this is two projects, therefore match may be able to rolled together.

**From:** Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>  
**Sent:** Thursday, September 16, 2021 11:06 AM  
**To:** Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>; SLEVIN Julie \* OMD <[julie.slevin@mil.state.or.us](mailto:julie.slevin@mil.state.or.us)>; Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>; Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>  
**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Johnson III, Lawrence <[lawrence.johnsoniii@fema.dhs.gov](mailto:lawrence.johnsoniii@fema.dhs.gov)>; GWIN Dan \* OMD <[dan.gwin@mil.state.or.us](mailto:dan.gwin@mil.state.or.us)>; Gregory Jackson <[gjackson@acdisaster.com](mailto:gjackson@acdisaster.com)>; Lucas Pagan <[lpagan@acdisaster.com](mailto:lpagan@acdisaster.com)>  
**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Thanks Doug,

Will review but wait for additional info before advancing.

Thanks.

Lee

**From:** Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>  
**Sent:** Thursday, September 16, 2021 11:04 AM  
**To:** SLEVIN Julie \* OMD <[julie.slevin@mil.state.or.us](mailto:julie.slevin@mil.state.or.us)>; Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>; Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>  
**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Johnson III, Lawrence <[lawrence.johnsoniii@fema.dhs.gov](mailto:lawrence.johnsoniii@fema.dhs.gov)>; GWIN Dan \* OMD <[dan.gwin@mil.state.or.us](mailto:dan.gwin@mil.state.or.us)>; Gregory Jackson <[gjackson@acdisaster.com](mailto:gjackson@acdisaster.com)>; Lucas Pagan <[lpagan@acdisaster.com](mailto:lpagan@acdisaster.com)>  
**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140  
**Importance:** High

ALL,

The amendment request for project#104046 (DR4432) has been prepared and is entered into Grants Manager/Grants Portal. Please feel free to review it, but not advance it in the process until we have an answer to the following issue raised by the Applicant-POBH:

**From:** Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>  
**Sent:** Monday, September 13, 2021 1:49 PM  
**To:** Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>  
**Subject:** FW: DR4432-POBH: - - RE: DR4432/Engineering-Permitting Assistance

Lee,

*Just got off the phone with Jack Akin (EMC Engineering). He said Gary D (Port Mgr) is concerned that the State supposedly has a matching fund limit per project of \$500,000; and if we consolidate the projects they might lose out on \$500,000? I told him I hadn't heard of that, but I felt he should contact Julie for clarification, and he said would and keep me in the loop. [9/16: I haven't heard back from Jack A]*

As soon as the State provides the clarification we'll know whether or not to advance this request. In the meantime, presuming the answer is " no, POBH will not lose out on \$500k", I am drafting the amendment request needed to de-obligate the \$80,400 A&E Services funding from project#110140 (DR4452), so it can be transferred to DR4432.

If anyone has questions, comments or other input please share with the entire group. Thanks for your help.

..... Doug

Douglas C Grant  
PDMG – Public Assistance  
DR4432OR  
732-804-9239  
[Douglas.grant@fema.dhs.gov](mailto:Douglas.grant@fema.dhs.gov)

**From:** SLEVIN Julie \* OMD <[julie.slevin@mil.state.or.us](mailto:julie.slevin@mil.state.or.us)>  
**Sent:** Thursday, September 9, 2021 1:03 PM  
**To:** Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>; Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>  
**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Johnson III, Lawrence <[lawrence.johnsoniii@fema.dhs.gov](mailto:lawrence.johnsoniii@fema.dhs.gov)>; GWIN Dan \* OMD <[dan.gwin@mil.state.or.us](mailto:dan.gwin@mil.state.or.us)>; Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>  
**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Thank you Jordan! What you wrote below was my understanding. In regards to the 4452 to 4432, I believe deob and move to 4432 was the plan.

**From:** Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>  
**Sent:** Thursday, September 9, 2021 12:21 PM  
**To:** Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>  
**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Johnson III, Lawrence <[lawrence.johnsoniii@fema.dhs.gov](mailto:lawrence.johnsoniii@fema.dhs.gov)>; GWIN Dan \* OMD <[dan.gwin@mil.state.or.us](mailto:dan.gwin@mil.state.or.us)>; SLEVIN Julie \* OMD <[julie.slevin@mil.state.or.us](mailto:julie.slevin@mil.state.or.us)>; Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>  
**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Hey Jack/All, I spoke with Lee again this morning and I think we're all on the same page. We will be requesting an amendment for 4432 and that is the one that we will capture all the costs, and mitigation in.

The only question that remained is regarding the funding already obligated under 4452 and whether or not we would need to write an amendment to move those funds from one disaster to another, or choose to leave them where they are. My opinion was that we would need to de-obligate the funds from 4452 and move them over to 4432 but I am not the Region and that would be a question for Steve, and the fabulous Region 10 closeout team.

Thank you,

Jordan Leigh  
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Mobile: (202) 856-5928  
[Jordan.Leigh@fema.dhs.gov](mailto:Jordan.Leigh@fema.dhs.gov)

Federal Emergency Management Agency  
[fema.gov](https://www.fema.gov)



# FEMA

**From:** Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>  
**Sent:** Wednesday, September 8, 2021 4:34 PM  
**To:** Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>  
**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Johnson III, Lawrence <[lawrence.johnsoniii@fema.dhs.gov](mailto:lawrence.johnsoniii@fema.dhs.gov)>; GWIN Dan \* OMD <[dan.gwin@mil.state.or.us](mailto:dan.gwin@mil.state.or.us)>; SLEVIN Julie \* OMD <[julie.slevin@mil.state.or.us](mailto:julie.slevin@mil.state.or.us)>; Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>  
**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Good Afternoon – Jordan -

To weigh in on all this – it appears that all the necessary information is available and was attached on 7/14/21 under 4432 project #104046. There were 3 attachments total that were added.

Therefore – it seems the operative question is – what is the SOP for initiating a version on an obligated project for an applicant that has not had an RTM? Does it need to be a formal amendment request from the Grantee, or is there some more direct way that we could proceed forward on this? Can you advise or redirect to someone who could advise? I think we know where we want to go – we just need some direction on how to go about getting there.

Jack B. Malone  
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# FEMA

**From:** SLEVIN Julie \* OMD <[julie.slevin@mil.state.or.us](mailto:julie.slevin@mil.state.or.us)>  
**Sent:** Tuesday, September 7, 2021 2:51 PM  
**To:** Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>; Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>  
**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>; Johnson III, Lawrence <[lawrence.johnsoniii@fema.dhs.gov](mailto:lawrence.johnsoniii@fema.dhs.gov)>; GWIN Dan \* OMD <[dan.gwin@mil.state.or.us](mailto:dan.gwin@mil.state.or.us)>  
**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Thanks Jordan for update! we should have all the information ready, to include cost estimate to pre-disaster. I believe its all been uploaded into GP? Should we have a call to discuss?

**From:** Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>  
**Sent:** Tuesday, September 7, 2021 11:52 AM  
**To:** Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>



**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>; Johnson III, Lawrence <[lawrence.johnsoniii@fema.dhs.gov](mailto:lawrence.johnsoniii@fema.dhs.gov)>; SLEVIN Julie \* OMD <[julie.slevin@mil.state.or.us](mailto:julie.slevin@mil.state.or.us)>; GWIN Dan \* OMD <[dan.gwin@mil.state.or.us](mailto:dan.gwin@mil.state.or.us)>  
**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Good morning,

We at the CRC have not received the versions for either projects yet in the CRC. We are unable to work a project until it reaches us at the CRC. My assumption is that both projects would need to be versioned, one to withdraw the A/E funding, and the other for validating the cost and writing up the project.

Please let me know if that is correct. In addition please let us know when we may see the versions at the CRC so we may begin working on them.

Thank you,

Jordan Leigh  
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Mobile: (202) 856-5928  
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**From:** Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>  
**Sent:** Tuesday, September 7, 2021 10:56 AM  
**To:** Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>  
**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>; Johnson III, Lawrence <[lawrence.johnsoniii@fema.dhs.gov](mailto:lawrence.johnsoniii@fema.dhs.gov)>; SLEVIN Julie \* OMD <[julie.slevin@mil.state.or.us](mailto:julie.slevin@mil.state.or.us)>; Gwin, Dan <[Dan.Gwin@state.or.us](mailto:Dan.Gwin@state.or.us)>; Gregory Jackson <[gjackson@acdisaster.com](mailto:gjackson@acdisaster.com)>; Lucas Pagan <[lpagan@acdisaster.com](mailto:lpagan@acdisaster.com)>  
**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140  
**Importance:** High

Good morning Jordan,

Earlier I left you a voice message inquiring about the progress on the cost validation of these merged projects. In this morning's daily huddle, Julie Slevin (State Public Assistance Officer) mentioned that the Applicant's Consulting Engineer, Jack Akin, had contacted her regarding the project status. She asked that Greg Jackson (State OEM rep) and I respond to Mr. Akin as soon as possible.

While Region 10 determines how the financial conditions are processed, the CRC cost estimate validation is underway as I understand your August 31<sup>st</sup> email, correct? Do you have an approximate timeline for concluding this step? Do your specialists need any additional information to continue? Would the R10 financial directives have to be in place before you can advance the project to the next steps? Thanks for updating the group. .... Doug

Douglas C Grant  
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[Douglas.grant@fema.dhs.gov](mailto:Douglas.grant@fema.dhs.gov)

**From:** Grant, Douglas  
**Sent:** Tuesday, August 31, 2021 2:08 PM  
**To:** Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>  
**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>; Ducote, David <[david.ducote@fema.dhs.gov](mailto:david.ducote@fema.dhs.gov)>; Ntagbu, Anthony <[anthony.ntagbu@fema.dhs.gov](mailto:anthony.ntagbu@fema.dhs.gov)>; Johnson III, Lawrence <[lawrence.johnsoniii@fema.dhs.gov](mailto:lawrence.johnsoniii@fema.dhs.gov)>  
**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Jordan,

Thanks for the heads up. I'll request some input and direction from Steve; as we don't want this complex project to hit any approval snags once you finish developing it. .... DCG

Douglas C Grant  
PDMG – Public Assistance  
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**From:** Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>  
**Sent:** Tuesday, August 31, 2021 1:47 PM  
**To:** Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>  
**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>; Ducote, David <[david.ducote@fema.dhs.gov](mailto:david.ducote@fema.dhs.gov)>; Ntagbu, Anthony <[anthony.ntagbu@fema.dhs.gov](mailto:anthony.ntagbu@fema.dhs.gov)>; Johnson III, Lawrence <[lawrence.johnsoniii@fema.dhs.gov](mailto:lawrence.johnsoniii@fema.dhs.gov)>  
**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Hi Doug, since I am not the Region I cannot determine if funding should remain or be de-obligated for the 4452 project. My recommendation would be to consolidate the two costs on 4432 since that is the project we are moving forward with. But again the Region would need to determine how they would like to handle the obligated funds.

Thank you,

Jordan Leigh  
Lane Manager | Consolidated Resource Center, West | Public Assistance Division  
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Federal Emergency Management Agency  
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# FEMA

**From:** Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>  
**Sent:** Tuesday, August 31, 2021 1:30 PM  
**To:** Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>  
**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>; Ducote, David <[david.ducote@fema.dhs.gov](mailto:david.ducote@fema.dhs.gov)>; Ntagbu, Anthony <[anthony.ntagbu@fema.dhs.gov](mailto:anthony.ntagbu@fema.dhs.gov)>; Johnson III, Lawrence <[lawrence.johnsoniii@fema.dhs.gov](mailto:lawrence.johnsoniii@fema.dhs.gov)>  
**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Hi Jordan,

It's been a couple of weeks already, so I thought I'd check in with you to see how the project merger is going. Since the original A&E projects have been obligated, I am not able to track the subsequent 'version' developments. Thanks for an update. .... Doug

Douglas C Grant  
PDMG – Public Assistance  
DR4432OR  
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[Douglas.grant@fema.dhs.gov](mailto:Douglas.grant@fema.dhs.gov)

**From:** Grant, Douglas  
**Sent:** Monday, August 16, 2021 3:31 PM  
**To:** Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>  
**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>; Ducote, David <[david.ducote@fema.dhs.gov](mailto:david.ducote@fema.dhs.gov)>; Ntagbu, Anthony <[anthony.ntagbu@fema.dhs.gov](mailto:anthony.ntagbu@fema.dhs.gov)>  
**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Many thanks, Jordan. Please let me know if I need to do anything within GM to have the DR4452 A&E costs withdrawn and reallocated to DR4432. .... Doug

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PDMG – Public Assistance  
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732-804-9239  
[Douglas.grant@fema.dhs.gov](mailto:Douglas.grant@fema.dhs.gov)

**From:** Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>  
**Sent:** Monday, August 16, 2021 3:18 PM  
**To:** Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>  
**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>; Ducote, David <[david.ducote@fema.dhs.gov](mailto:david.ducote@fema.dhs.gov)>; Ntagbu, Anthony <[anthony.ntagbu@fema.dhs.gov](mailto:anthony.ntagbu@fema.dhs.gov)>  
**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Good afternoon Doug,

We should be good to go on these projects. I spoke with our senior leadership. We should be able to capture the entire project costs on the one project in DR 4432, which will simplify the mitigation and scope. We will use project notes to reference the compounding damages.

I believe the remaining project under 4452 will need to have the A/E costs withdrawn and captured instead under the project on 4432.

Thank you,

Jordan Leigh

Lane Manager | Consolidated Resource Center, West | Public Assistance Division

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FEMA

**From:** Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>

**Sent:** Monday, August 16, 2021 3:06 PM

**To:** Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>

**Cc:** Slevin, Julie <[Julie.Slevin@state.or.us](mailto:Julie.Slevin@state.or.us)>; Gwin, Dan <[Dan.Gwin@state.or.us](mailto:Dan.Gwin@state.or.us)>; Lucas Pagan <[lpagan@acdisaster.com](mailto:lpagan@acdisaster.com)>;

Gregory Jackson <[gjackson@acdisaster.com](mailto:gjackson@acdisaster.com)>; Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; Marusin, Lee

<[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William

<[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>; Ducote, David

<[david.ducote@fema.dhs.gov](mailto:david.ducote@fema.dhs.gov)>; Ntagbu, Anthony <[anthony.ntagbu@fema.dhs.gov](mailto:anthony.ntagbu@fema.dhs.gov)>

**Subject:** DR4432/4452 - POBH: DREDGING projects #104046 & 110140

**Importance:** High

Good afternoon Jordan,

Thanks for conferencing with Lee and me late last week, regarding the two above-referenced Port of Brookings Harbor dredging projects. Under the two initial A&E v0s, the Applicant's engineering design was completed and the Joint Permit Application (JPA) was submitted to the USACE. For detailed information, please refer to the design and permit documentation uploaded July 14, 2021 into Grants Manager under DR4432OR-project #104046 – Dredging. As we understand the process, the next step for the CRC would be to complete cost estimates to establish the Version 1s.

As discussed, per the full initial project descriptions, the two projects are not independent of each other, and the current design and permit documents reflect this. As well, the documents identify substantial mitigation measures needed to secure the repair works and prevent future similar disaster conditions. The State/Recipient has requested that we now combine the scope and costs of these into the one DR4432 project#104046, so that project recovery to pre-disaster conditions and 406 mitigation measures can be addressed in total. Due to the upcoming, short annual dredging allowable work window we are requesting the CRC to expedite the GM processes as much as possible so that hopefully, the EHP and Mitigation activities are concluded in time for the Applicant to initiate the dredging operations early this Fall [note: this window is only from October 2021 thru March 2022].

Thanks for undertaking the next steps towards finalization of the comprehensive project. Please let us know if we need to provide any additional information or documentation. .... Doug

Douglas C Grant  
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*- Engineers/Scientists, LLC*

5/16/21

Gary Dehlinger  
Port Manager  
Port of Brookings Harbor  
Brookings, OR 97477

### Scope of Work for FEMA 4432, 4452

#### PA-10-OR-4432

Title 104046-Dredging, Application No. PA-10-OR-4432 (4432) is assigned a period of performance beginning May 2, 2019. The Subgrant Application proposes to repair damages as a result of the February 23<sup>rd</sup> – 26<sup>th</sup> severe storms that engendered landslides and deposited debris throughout the Port of Brookings Harbor, and included the shallowing of key marine vessel moorage, the destabilization of embankments (particularly along the West Basin 2 wall), and the accumulation of sediment beneath docks near the west embankment of Basin 2.

The sediment accumulating beneath the docks caused them to rest on the mudline beneath during low tides, causing damage to the docks. Landslides that occurred during the storm along the Basin 2 west embankment covered previously existing riprap along areas identified as Sites 1, 2 and 3, and revealed previously buried riprap in areas along embankment between these three sites. 4432 as it was proposed was purposed to remove sediment that had accumulated from the storm. The sediment volumes, about 7500 yd.<sup>3</sup> in Basin 2 and 500 yd.<sup>3</sup> in Basin 1, were estimated from comparisons of recent, sequential bathymetric surveys. Sediment migrated into identified areas of the Port basins via wild fire-generated material from the Chetco River, overtopping stormwater along the south and west embankments in Basin 2 and along the west and north Ice House Inlet embankments, and from pore water from the embankment walls themselves.

#### Connection with Application Title: 110140 - Port Dredging, Application Number: PA-10-OR-4452

Noted in the Special Notes of the 4432 Application is that the sediment issues and solutions associated with 4452 are inextricably connected to those of 4432.

Engineering determinations, including comparative bathymetric surveys, found that about 15,500 yd.<sup>3</sup> of sand/soil/mud debris had accumulated in Basin 1, and about 12,500 yd.<sup>3</sup> of the same accumulated in Basin 2 as a result of the April, 2019 storm.



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These two events were back to back and overlapping with respect to hydrographic data, as it would be noted that the rising limb of the April flows would overlap the falling limb of February flows, creating a “one- two punch” on vulnerable Port locations, so that the second event in April, 2019 created more damage than the first event in February.

Completing these two projects (4432 and 4452) as one provides not only logical, but economic benefit, in that the duplication of engineering, permitting and mobilization/demobilization of equipment required for both of these projects, as well as for any proposed mitigation actions, can be averted.

As it now stands, these two projects have each been separated by FEMA into two subprojects, (Phase 1 and Phase 2) the first of which is the engineering and permitting functions necessary to assess, design and permit both 4432 and 4452. \$39,600 was assigned to 4432 and \$80,400 was assigned to 4452 for the engineering/permitting Phase.

The two projects (4432 and 4452) would be accomplished simultaneously, saving several hundred thousand dollars. Thereby the preliminary estimated cost for dredging the 38,000 yd.<sup>3</sup> is \$1,770,000. .

The Work Orders 47755 and 45060 were filled and submitted by the Port describe the dredge volumes with attached bathymetric and engineering documentation, provided after the 9/20/2019 FEMA Site Inspection.

Engineering estimates place the budget close to the original at \$1,790,000, as itemized in the attached **EXHIBIT A – Dredging.**

### **Damage #304676; Basin 2 - Slope Failure and Scope of Work**

The severe storm deposited a mixture of sand/soil/mud within the harbor. The debris caused a loss of soil cohesion in the slopes and steep embankments of the Harbor. Previously buried toe slabs and rocks meant to armor and help support the steep overlying embankment are now revealed, particularly along the west side of Basin 2.

Cause of Damage: The severe storm deposited a mixture of sand/soil/mud within the harbor. The debris caused a loss of soil cohesion in the slopes and steep embankments of the Harbor. Previously buried toe slabs and rocks meant to armor and help support the steep overlying embankment are now revealed, particularly along the west side of Basin 2. The erosive mechanism is described in more detail below in the section named **Storm and Erosion Processes.**



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Damage Description: Primary damages to Port embankments from 4432 and 4452 Disasters were observed and have been recorded in Basin 2, the south basin of the Port of Brookings Harbor. Generally, riprap repair is the most economical repair method for these slopes.

On the 2 East Slope, 542 CY of unclassified mixed riprap, 195 FT long x 5 FT wide x 15 FT deep would be required.

On the South Slope, 578 CY of unclassified mixed riprap, 208 FT long x 5 FT wide x 15 FT deep would be required.

On the Transient Slope, 289 CY of unclassified mixed riprap, 104 FT long x 5 FT wide x 15 FT deep would be required.

On the Basin 2 West Slope, 502 CY of unclassified mixed riprap, 452 FT long x 5 FT wide x 6 FT deep would be required.

The measurements for the embankment are based on applicant provided engineering information.

The unitized engineering budget for the riprap repair is **\$675,157**, as itemized on **EXHIBIT A - Slope Repairs**.

The scope of work for Slope Repairs is herein proposed to be revised, replacing partial and therefore vulnerable small repair slopes, some of which (east and transient) are more stable and of lower priority, with the recommended, continuous repair of the west and south slopes of Basin 2. Volumes of riprap needed remain unchanged.

The unitized total engineering budget for the revised scope of work is presented on the attached **Exhibit A - FEMA Repairs** to pre-disaster Conditions is therefore **\$2,465,157**. The engineered drawings showing the Slope Repairs are attached as files named **Slope Repairs DWG - West Basin 2 Wall**, and **Slope Repairs DWG - South Basin 2 Wall**.

### **Proposed Lower Cost Dredging Alternative, and Scope of Work**

A Feasibility Study was produced for the Port of Brookings Harbor, investigating dredging alternatives. The Study was summarized in a PowerPoint Presentation to the Port of Brookings Harbor Staff and Board of Commissioners. A trimmed version to reduce file size) of the Presentation, with videos, disposal, case study, maintenance and permitting requirements removed, is attached as **EXHIBIT D**.





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The Study was generated by the growing concerns about sedimentation in the harbor that is being accelerated by Chetco wildfire erosion. The Study investigated the feasibility of implementing an in-house maintenance dredging program and operation at the Port, in comparison to other dredging alternatives. The analyses included barge and scow, hydraulic suction dredging, mechanical, or clamshell dredging; disposing of sediments upland via storage piling on land, or other out-of-water beneficial or non-beneficial uses such as trucking to a more distant disposal area (e.g. landfill or private property), in-water, including ocean disposal, beach nourishment, flow-lane and tidal/intertidal storage, all evaluated via data and experience.

A continuous reduction in the availability of safe moorage due to shoaling is occurring at the Port. In order to focus on solutions that make sense, a these options were considered in the Study. Some have been reviewed in the past and have been determined to be too expensive, cumbersome and/or unpredictable. Overall budgetary constraints, primarily caused by high dredging costs, limit the Port's ability to maintain its moorage. Funds for necessary paving and stormwater control that would otherwise be implemented to protect the duration of the Port embankment repairs have instead been allocated to the maintenance of navigable depths.

In order to construct a more permanent hardening of these embankments, and to provide remedy against future predicted sediment flows generated by the Chetco wildfires, the Port presents an alternative that could assist the Port to respond, not only to sediment from the 2019 disasters, but also to increasing sediment, already observed (see attached **EXHIBIT E**) shoaling increases.

The dredging costs for this lower cost alternative is **\$1,192,174**, reduced \$597,826 from that of the original dredging method proposed.

This alternative, additional to the estimated savings, reduces the Port's vulnerability to damages from future, predicted shoaling. Budget details for the Lower Cost Alternative are presented in the attached **EXHIBIT B**. Note that the Total Project cost in **EXHIBIT B** of **\$1,717,331** includes the **\$675,157** for Slope Repair.

Preliminary drawings showing the proposed Lower Cost Alternative, are attached, files entitled **Sediment Storage - Proposed Dredging Alternative DWGS** and **Equipment Storage-Proposed Dredging Alternative DWGS**, which show the proposed Scopes of Work.

### **Public Assistance 406 Mitigation Funding Request, and Scope of Work**

The Port proposes that the Public Assistance Program and Policy Guidelines (V3.1), Appendix J, 1.B, enlists the mitigation of the erosion threat to be cost effective, as described below. 100% of the Total Repairs budget for 4432 (**\$949,464**) and 100% of the Total Repairs budget for 4452 (**\$917867**).



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The mitigation funding would be used in part to extend paving from the Sediment Storage access road and work area in the Commercial Area, shown in the drawings with file name **Sediment Storage - Proposed Dredging Alternative DWGS**, southward to the presently unprotected embankments adjacent to the commercial receiving docks and Ice House Inlet, shown in the drawings with file name **Mitigation of Paving to Commercial Embankments DWGs**.

The mitigation funding would also be used in part to extend paving from the Equipment Storage access and work area in the Boatyard, shown in the drawings with file name **Equipment Storage-Proposed Dredging Alternative DWGS**, north and westward to the presently unprotected embankments adjacent to the Boatyard which is the south Basin 2 wall, shown in the drawings with file name **Mitigation of Paving to Boatyard Embankments DWGs**.

The last portion of mitigation funding would be used to protect the wesin part to extend paving from the Equipment Storage access and work area in the Boatyard, shown in the drawings with file name **Equipment Storage-Proposed Dredging Alternative DWGS**, north and westward to the presently unprotected embankments adjacent to the Boatyard which is the west wall of Basin 2, and the most impacted embankment at the Port. This proposed project shown in the drawings with file name **Mitigation of Paving to Basin 2 West Embankment DWGs**.

Although it can be seen that an intended use for this pavement is as an RV area, it is herein underscored that no infrastructure (buildings, water lines, electric service, sewer lines or connections, etc.) are included in this budget. The paving shown will effectively cut off surface stormwater flows, and intercept 85% of the water seeping into permeable soils.

### **The Need for Proposed Mitigation**

It is evident that three recurring factors (1. Existing unstable embankments; 2. High winds and severe winter storms and 3. Increased erosion and sediment migration do to the Chetco wildfires) will continue to degrade and block future Port operations. The recurrence of these factors is documented by, among other events and repairs, FEMA repairs that have occurred at the Port of Brookings Harbor in the last 10 or 11 years. These recurrences have been presented in the Benefit/Cost Analyses, produced within the framework of Version 6.0.0 of Build 20200819-1933, attached as **EXHIBIT F**. The following analyses the erosion processes occurring along the south and west embankments of Basin 2, and the exposed embankments adjacent to the commercial receiving docks and Ice House Inlet.



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## **Storm and Erosion Processes**

Contributing factors to embankment failure and subsequent sediment accumulation, and associated Port dock damages, are high winds and storm-generated erosion from embankment overtopping (stormwater flows that combine into streams and flow over the top of embankments, scoring and weakening the grade) and pore water (water seeping into permeable landings and, via hydraulic head, breaking through side banks, accelerating embankment erosion. Paving these landings and controlling stormwater flows along the west and south Basin 2 walls, and the Ice House Inlet commercial areas, would provide permanent protection to the Port.

## **Stormwater Flow Volumes**

Rainfall at the Port of Brookings Harbor averages 83.5 inches/year, 2.2 times the national average. Of the 106.2 days in a given year that rain falls at the Port, nearly falls between late September and early to mid-April of each year. An affected landing zone of 50 – 100' in width, borders the Port Basin shorelines. This margin covers a footprint of about 734,500 ft.<sup>2</sup>.

Along that total area about 117.34 acre feet (5,111,473 ft.<sup>3</sup>) of rain water flows over or infiltrates along the approximately 5800 foot long Port Basin shoreline.

## **Affected and Relatively Non-affected Embankments**

The margin areas along the embankments of the north and east of Basin 1 are paved, and the stormwater in those areas is controlled by catch basin and piping systems. On the west side of Basin 1 is a heavy riprap jetty. A couple hundred feet of the north end of the west Basin 2 landings are also paved and stormwater is similarly managed, as that area is occupied by the US Coast Guard. Much of the landing area approaching the Boatyard on the east side of Basin 2 has been paved and is equipped with stormwater catch basins and piping. The landing area margin above and including the fueling supply and Fuel Dock have recently been paved, and catch basins and piping installed.

This was done because of the recent failure of the Dock Access Pad, which was falling westward into Basin 2, due to the same erosive mechanisms described in this section. The concrete pad was removed, the area above the pad embankment (about 1300 ft<sup>2</sup>) was paved and two catch basins and connecting underground piping placed.

Most of the approaching landing between the Fuel Dock area and the Boatyard area along the east side of Basin 2 are more gradually sloped and erosion due to stormwater infiltration and overtopping are of much less concern to the Port.

Concerns with respect to accelerated erosion therefore remain at Port Basin shorelines surrounding the Commercial Receiving Dock areas, the Icehouse Inlet and the Basin 2 south and west embankments.



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Accelerated erosion from stormwater overtopping and infiltrating the Commercial Receiving Dock and Icehouse Inlet areas are not directly attributable to the 2019 February and April damages (4432 and 4452), but are caused by the erosive mechanisms described in this section.

## **Damage Process**

Existing riprap has been buried or unraveled, and embankment cave-ins have, as a result of these two back-to-back events, occurred and continue to occur along the approximate 1300 linear feet of exposed embankment along the south and west Basin 2 walls.

The average soil permeability coefficients (using C.I.A. ground surface classifications) of the landings approaching these embankments is about 0.4, and so approximately 40% precipitation on the landings affecting these embankments (about 352.5 ft.<sup>3</sup>/linear foot/season) sinks into the ground and joins the high groundwater flows during storm season, found by average piezometric data to be at about 8 foot below ground surfaces.

This excess water works its way by pore pressure (8 feet head or greater) at elevations of 8 to 10 feet from top of bank and erodes the base material along these embankments. The remaining 60 percent (about 529 ft.<sup>3</sup>/per linear foot/season) overtop the embankment on these unpaved areas, scoring and weakening the embankment structure.

The above would not be enough data to guide remediative design, unless augmented by duration data. This data is available via the Rainfall Intensity-Duration-Recurrence Interval (RDI) Curves (these can be obtained from the ODOT Manual, Appendix A, Zone 1).

There it can be seen that rainfall often occurs in the area with RDI coefficients of 1 for about 60 minutes, and as high as 4 for five minute intervals. Such coefficients, using classical stormwater flow calculations result in 4 to 16 cubic feet per second over the embankments for durations ranging from 5 minutes to an hour. The narrow margin lengths mean that concentration times are nearly instantaneous. This data represents a small winter storm at the Port. Major storms, such as the ones that occurred in April, 2019, last for days, with stormwater flows that range as described. High embankments of non-cohesive soils (sand) that are margined with permeable soils are not well protected against such stormwater flows, often driven by high (60 – 100 mph) winds.



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## Stormwater Contamination

On a side note, natural, commercial and industrial releases of state and federally regulated hazardous constituents have, via stormwater sampling and laboratory analysis, been found to be carried to measured monitored stormwater outfalls during winter storm events.

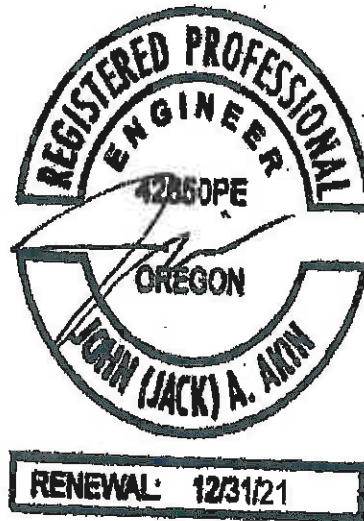
Engineering and Port management investigations have concluded that containment and encapsulation of landings and presently eroding surfaces, and embankment stabilization, as provided by stormwater catch basin/piping and paving, would not only permanently stabilize slopes and harden the Port's infrastructure against overtopping and pore water erosion, but would also provide the added benefit of protecting the public health and environment, including ESA-listed species, from excessive contamination from regulated substances.

All stormwater data reports (DMRs) showing the exceedances are available upon request.

Therefore the proposed mitigation would provide the additional benefit to effectively reduce soil-borne contaminants presently being released into the waters of the US/State.

Sincerely

Jack (John) Akin, MS, PE, IC, HMS, CAI  
EMC-Engineers/Scientists, LLC



**EXHIBIT A - FEMA 4432 AND 4452 REPAIRS**

Dredging	Equipment Mobe/Demobe, and Sump Basin	Trucking and Disposal \$/cy	Hydraulic Dredging \$/cy	Volume in cy	Price Cost for SDR 21 HDPE, 3000 ft. \$1478	Dredging Costs
FEMA 4432	190,000	25	16	8,000	42000	560000
FEMA 4452	0	25	16	30,000	0	1230000
<b>TOTAL BUDGET</b>						<b>1790000</b>

Slope Repairs	LS Equipment Mobe/Demobe	\$/sf Excavation, Erosion Control	\$/cy Move, Mix, Place, Compact	\$/cy Purchase & Deliver Riprap	\$/cy Place Riprap	Fabric \$/sf
All Slopes- #304676	65000	2.25	97	102	35	0.65
\$/cy Base Rock Purchase, Delivery and Placement	Volume of Base Rock, cy	Area of Erosion Controlled, sf	Volume Soil/cy	Volume Riprap cy	Area Fabric, sf	
140	1010	28700	1250	1911	32500	
Excavation and Erosion Control Total	Move, Mix and Compact Total	Excavation and Deliver Total	Volume Soil Total	Volume Riprap Total	Area Fabric Total	<b>TOTAL \$/ADD/CON</b>
64575	121250	194922	66885	21125	141400	<b>675157</b>

Engineering/Permitting 120000	<b>Slope Repairs Total</b>	<b>675157</b>	<b>Dredging Total</b>	<b>1790000</b>	<b>PROJECT TOTAL</b>	<b>2465157</b>
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**EXHIBIT B - FEMA 4432 AND 4452 REPAIRS, Lower Cost Alternative**

<b>Dredging</b>	<b>120 HP Electric Dredge, Training, Shipping</b>	<b>Trailer-Mounted Generator, Shipped</b>	<b>3000 ft. 8" Dia. HDPE Pipe, \$4/ft.</b>	<b>Volume in cy</b>	<b>LABOR: per 300 cy/dy, 2600 labor-hrs total reqd, @ \$20/hr</b>	<b>Dredging Costs</b>
FEMA 4432	230,000	60000	12000	8,000	11200	321,200
FEMA 4452	0	0	0	30,000	42000	72,000
<b>Totals</b>						<b>393200</b>
<b>Access &amp; Work Areas</b>	<b>Coverage, sf</b>	<b>\$/cy Excavation, Grading</b>	<b>\$/sf Subgrade Compaction</b>	<b>\$/cy Mixed Aggregate for Subbase, placed and compacted</b>	<b>\$/Ton Asphalt, Placed</b>	<b>\$/cy Concrete</b>
Sediment Storage	37250	20	0.5	50	125	130
Equipment Storage	10750	20	0.5	50	125	130
<b>\$/Specified Catch Basin, ea</b>	<b>\$/ft Curb &amp; Gutter, Labor</b>	<b>Cut/Fill Volumes, cy</b>	<b>Volume of Sub-base and Base Rock, cy</b>	<b>Volume of Asphalt, Tons, 3" Thick</b>	<b>Length of Curb &amp; Gutter, ft</b>	<b>12" SW Pipe Installed/ft.</b>
3000	32	3290	1150	745	1911	25
3000	32	600	332	215	65	25
<b>SW Pipe Length, ft</b>	<b>No. Catch Basins</b>	<b>SW System Total</b>	<b>Grading Total</b>	<b>Sub-Grade Compaction Total</b>	<b>Aggregate Total</b>	<b>Asphalt Total</b>
800	4	32000	65800	18625	57485	93125
100	1	5500	12000	5375	16590	26875
<b>Curb &amp; Gutter Total</b>	<b>\$/sf Sediment Storage Wall, with footing</b>	<b>Sediment Storage Wall Area (L X 3' H), sf.</b>	<b>Sediment Storage Wall Total</b>	<b>16' X 16' X 45' Prefab Equipment Storage Bldg, Steel</b>	<b>Engineering &amp; Permitting</b>	<b>Riprap Wall (See EXHIBIT A)</b>
72629	30	3300	99000	0	39,600	0
2470	30	0	0	21500	80,400	675157
<b>Repair of Damaged Sidewalk from West &amp; South Wall Excavation</b>	<b>PROJECTS</b>	<b>TOTAL BUDGET</b>	<b>TOTAL REPAIRS-LOWER COST ALTERNATIVE</b>		<b>1867331</b>	
150000	FEMA 4432	949464				
	FEMA 4452	917867				

EXHIBIT C - FEMA 4432/4452 MITIGATION, Assuming Implementation of the Lower Cost Alternative

Access & Work Areas	Coverage, sf	\$/cy Excavation, Grading	\$/sf Subgrade Compaction	\$/cy Mixed Aggregate for Subbase, placed and compacted	\$/Ton Asphalt, Placed	\$/cy Concrete	
Commercial Area	101815	20	0.5	50	125	130	
Boatyard	93750	20	0.5	50	125	130	
Kite Field RV Area	100200	20	0.5	50	125	130	
\$/Specified Catch Basin, ea	\$/ft Curb & Gutter, Labor	Cut/Fill Volumes, cy	Volume of Sub-base and Base Rock, cy	Volume of Asphalt, Tons, 3' Thick	Length of Curb & Gutter, ft	12" SW Pipe Installed/ft.	
3000	32	12800	3142	2036	1100	25	
3000	32	2500	2894	1875	1200	25	
3000	32	11333	887	575	1500	25	
SW Pipe Length, ft	No. Catch Basins	SW System Total	Grading Total	Sub-Grade Compaction Total	Aggregate Total	Asphalt Total	
3200	5	95000	256000	50908	157122	254538	
1500	4	49500	50000	46875	144676	234375	
1500	4	49500	226660	50100	84367	71875	
Curb & Gutter Total	TOTAL BUDGET	PROJECTS	\$ Mitigation	TOTAL BUDGET FOR PROPOSED MITIGATION, ADDITIONAL TO TOTAL REPAIRS			
41807	855374	4432	1110544			1965918	
45607	571033	4452	855374				
57009	539511						
				HMGP Request	406-4432	406-4452	
				98,587	Mitigation	949464	917867
				4452+HMGP	Repair	949464	917867
				1,934,321	TOTAL/Project	1898928	1835734
					TOTAL	3734662	
<b>TOTAL BUDGET FOR PROPOSED REPAIRS, AND FEDERAL/STATE MITIGATION</b>		<b>3,833,249</b>					



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# **EXHIBIT D – POWER POINT PRESENTATION**

*(Videos and Other Sections Removed)*

# A Feasibility Study Was Done for the Port

## **IN-HOUSE DREDGING: FEASIBILITY STUDY**

By Jack Akin, MS, PE, IC, HMS, AI

For

**Port of Brookings Harbor**

**Gary Dehlinger, Port Manager**

**Travis Webster, Harbormaster**

## In Summary

This study investigated the feasibility of implementing an in-house maintenance dredging program and operation at the Port, in comparison to other dredging alternatives.

A continuous reduction in the availability of safe moorage due to shoaling is occurring at the Port. In order to focus on solutions that make sense, a number of options have been considered in the Study. Some of these options have been reviewed in the past and have been determined to be too expensive, cumbersome and/or unpredictable.

Barge and scow, hydraulic suction dredging, mechanical, or clamshell dredging; disposing of sediments upland via storage piling on land, beach nourishment, or other out-of-water beneficial or non-beneficial uses, trucking to a more distant disposal area (e.g. landfill or private property), or in-water, including ocean disposal, beach nourishment, flow-lane and tidal/intertidal storage were evaluated via data and experience.

For the purposes of comparison these dredging and disposal options use a volume of 25,000 cubic yards of sediment.

Barge and scow dredging has been found to be both expensive and impractical, primarily due to considerations of navigability and availability. The standard barge may be as large as 200-foot long and 50-foot wide, with a 12-foot deep scow. Such a barge would be outfitted with appropriate duty spuds for anchoring and stability once it is in the desired location. The spuds on the barge must be of sufficient length allowing it to anchor itself in harbor depth of water. Out of the USACE's most recent abstract of offers for the barge and scow dredging of several port locations nearby, mobilization and demobilization alone, depending upon the selected sediment placement location, varies in the cited bid from \$477,211 to about \$756,250. Dredging/disposal per cubic yard was bid competitively, based on the large total volume of sediment to be dredged for this multi-locational project.

During third quarter 2019, for example, while McAmis, a barge and scow USACE winning subcontractor, was fulfilling their contract with the USACE at Winchester Bay, they accepted an offer from Salmon Harbor Marina to add to their federally contracted work by “piggybacking“ the Marina’s work. A \$21/cubic yard charge was proposed to the Marina, rather than the \$11 or \$12/ cubic yard offered to the USACE as part of the federal project. The Marina would have had to pay hundreds of thousands of dollars to mobilize such equipment for themselves, unless they were able to gain agreement to “piggyback“ as described. The cost to dredge 25,000 cubic yards, if “piggybacking” was available, is therefore estimated at the Port of Brookings Harbor to be \$525,000, and, if “piggybacking” was not available, at best, \$777,000 ( $\$12/\text{cy} + \$477,000 \text{ mobe/demobe}$ ). However, many areas requiring dredging in Basins 1 and 2 would not be accessible via this equipment.

Hydraulic suction dredging utilizing contracting standard swing-ladder dredges has been seen to be a viable method at the Port, but comes with high move/demove costs, and does not lend itself to in-house maintenance dredging at smaller ports and marinas. Move/demove costs to and from nearby locations have been seen to range from \$40,000 to \$55,000. Dredging costs additional to move/demove have been found to range from \$20 to \$35/cubic yard, if sediment is disposed to nearby in-water or upland locations.

However, without development, no nearby in-water or upland disposal locations are available for the Port, and so the only other alternative is that of ocean disposal.



A number of analytical routines have been done for the Port, including selection of an appropriate pipe diameter (14" OD), determination of the required DR or SDR (17 SDR HDPE), determination of the required weighting, and of the design, construction and spacing of ballast weights, buoyant force, weight of pipe and pipe contents, methods of installation, preparation of land-to-water transition zones and, when required, underwater bedding, assembly of individual lengths of pipe into long continuous lengths, launching of pipeline into water, bending radius at which buckling can be initiated, etc. The higher sediment slurry velocities required in long pipelines to prevent clogging result in higher total dynamic head (TDH).

Combinations of pipe thicknesses necessary to resist the high total dynamic head (TDH) created by slurry traveling through 12,000 foot pipe lines at the recommended velocity are not found to be available for reasonably sized dredges, and so, booster pumping would be required.

Additional to the complexities associated with pumping slurry such long distances are those presented by the challenging task of working with a pipeline placed through river and ocean currents, whether floating or sunken. EMC has estimated designed and provided project engineering for ocean disposal and estimates the cost for such a project (25,000 cubic yards to the ocean disposal location via pipeline) from the Port to be \$980,000.

## **Disposal Limitations**

1. Available ocean disposal location is about 12000 feet from the furthest Port reach.
2. Hydraulic suction dredges small enough to navigate throughout the Port docks would be equipped with pump horsepower not sufficient to pump that distance, without at least one in-line booster pump. Potential pipeline pathways require a combination of land and water routes unfriendly to a successful dredging operation during winter weather.
3. USACE has determined in the past that the Chetco River reach and entrance are not approached with enough river flow energy to deliver flow-lane sediments beyond the federal channel.
4. No nearby in-water storage areas are permitted to be used by the Port.

5. When considering upland storage during a dredging event at the Port, it must be taken into account that any possible storage and de-watering area within the Port limits sediment volumes during a single event to 25,000 cubic yards, and reasonable volumes of 6 – 8000. Therefore, use of a large dredge for upland disposal at the Port would require multiple events and subsequently multiple move/demove costs, rendering this option infeasible.

6. Likewise, to utilize barge and scow for upland storage at the Port would present the Port, in addition to multiple handling of the sediment for placement, the same volume limitations and associated multiple move/demove costs.

So this Study concludes that a low cost, in-house dredging operation would bring many advantages to the Port. Flexibility and rapid response to ongoing mooring challenges would bring a level of internal control not often experienced at small ports in Southern Oregon. During our review of practicable alternatives, we concluded that a smaller and more mobile dredging unit could provide the required navigability, and in-house control, that would be affordable and be more able to provide the Port with long-term maintenance dredging.

It is also concluded that annual maintenance dredging volume requirements at the Port are relatively small, because the major portion of shoaled sediments from Port facilities slough to federally maintained channels, and so a modest maintenance program, on an annual basis, could maintain the Port mooring spaces, and additionally could enable the Port to gradually and affordably reduce its backlog, which has been accumulating over decades.

The above conclusions bring us to the analyses of in-house operational scenarios, utilizing small, maneuverable dredges, and local, perhaps even beneficial sediment disposal options.

EMC in the past has specified portable, centrifugal pump-driven slurry pumps, well fitted for the dredging of dock locations (e.g. Port of Port Orford).

So equipment provided by BPH, Eddy, DragFlow and TOYO Pumps were analyzed and compared.

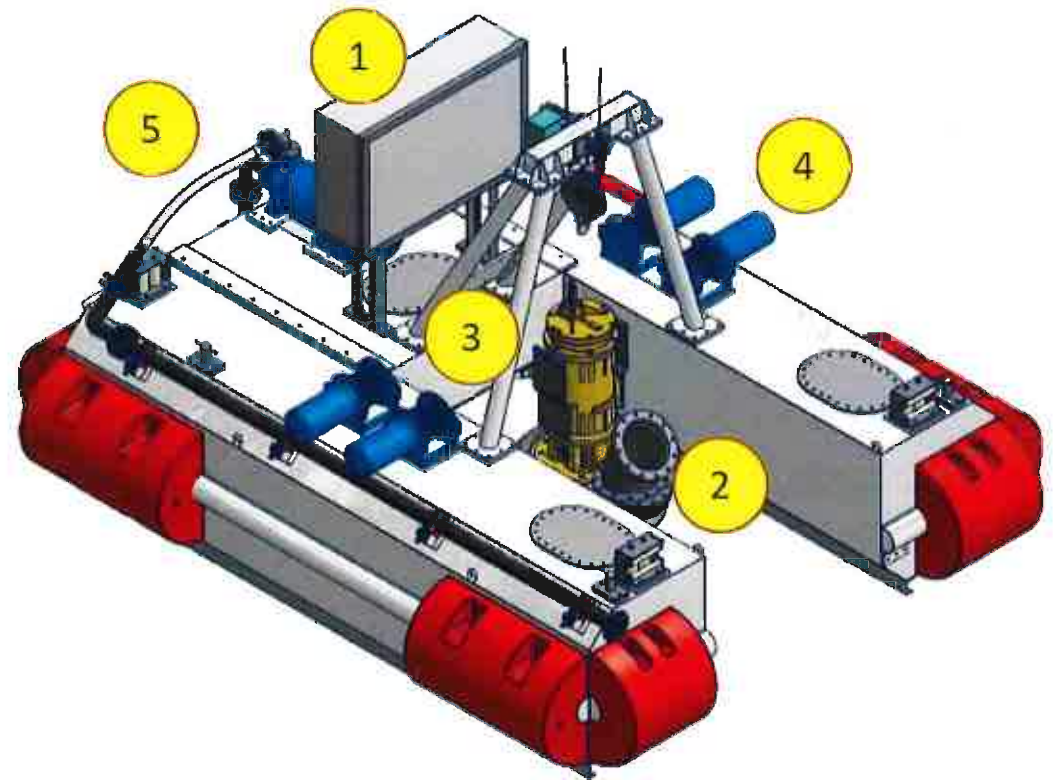
After considering economic value, equipment design, horsepower, maneuverability, etc., EMC recommends that the Port consider an in-house, small dredge system, utilizing the DragFlow DPR-120 remote controlled dredge, rigged with the EL 1204HH C Model pump system.

Slides and video clips focus on this equipment, its applicability, function and maintenance. We will also briefly review the proposed upland disposal option, permitting requirements and costs associated with this recommended in-house dredging option.



## Dredge Details:

1. Control Panel
2. Dredging pump
3. Electric Hoist
4. 4 Winches (45 – 110m)
5. Jet Ring System for breaking the material to be dredged



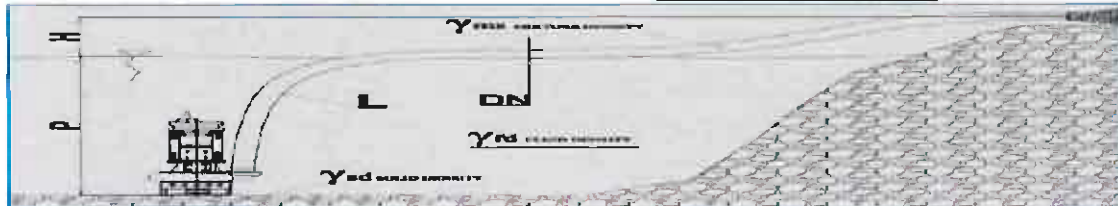
Client: Jack Akin - EMC-Engineers-Scientists, LLC-Oregon-US  
 Project: SHM feasibility-

Date: Oct 28, 2020  
 Author: Maurice

**Mixture Details**

Solids concentration in the mixture  
 % by volume  
 corresponding to % by weight  
**Solid Particles Dimension**  
 Particle Median Diameter  
 Liquid SG  
 Solids SG  
**Mixture Specific Gravity**  
 Fluid dynamic viscosity

	25	%
	40	%
<b>d50 &gt; 15 mm</b>		
	1	kg/dm <sup>3</sup>
	2	kg/dm <sup>3</sup>
	1.25	kg/dm <sup>3</sup>
	0.001	Pa s



**Application Details**

Geodetic Height (Air) = H  
 Geodetic Height (Water) = P  
 Pipeline Total Length = L  
 Pipe Internal Diameter = DN  
**Total Mixture Capacity**

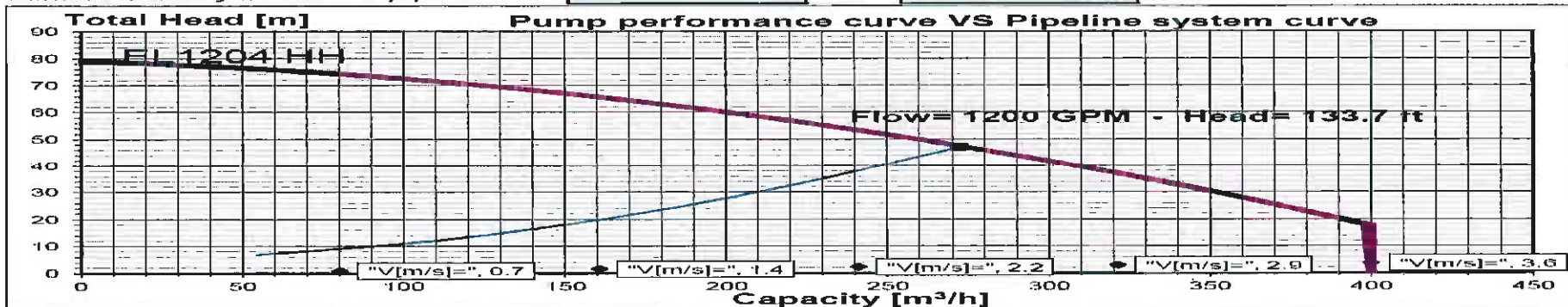
	1.2	m		4	ft
	15.2	m		50	ft
	914.4	m		3000	ft
	198.2	mm		7.803	Inch
	273	m <sup>3</sup> /h		1200	GPM

**System TDH at set capacity**

Friction loss along the pipeline  
 Concentrated pressure drops  
 Geodetic: [H+(mixSG-liqSG)\*P]  
**Total Dynamic Head (TDH)**  
 Mixture velocity inside the pipeline

SLURRY [m]		SLURRY [ft]		
	35.3	m	115.7	ft
	0.5	m	1.5	ft
	5.0	m	16.5	ft
	40.8	m	133.7	ft
	2.5	m/s	8.0	ft/s

<b>REQUIRED POWER</b>
100 HP
<b>PUMP POWER</b>
120 HP



\* All the above values come from theoretical calculations. The solid concentration can vary from 10% to 50% pump capacity due

**Port of Brookings-Harbor**  
**Calculation Sheet For 6" and 8", SDR 21 Pipeline, 120 hp**  
 by Jack Akin, MS, PE

$Q_{gpm}$	1098.00	1200.00	3000.00	1000.00	1720.00	3000.00
$C_{HW}$	155.00	155.00	155.00	155.00	155.00	155.00
$L_n$	3000.00	3000.00	3000.00	3000.00	3000.00	3000.00
$d_{in}$	5.96	5.96	5.96	7.75	7.75	7.75
$Q_n^{3/8}$	2.45	2.67	6.68	2.23	3.83	6.68
$V_{ft/s}$	12.65	13.82	34.55	6.80	11.69	20.39
$e_n$	5.00E-06	5.00E-06	5.00E-06	5.00E-06	5.00E-06	5.00E-06
$V_{50}$	1.45E-05	1.45E-05	1.45E-05	1.45E-05	1.45E-05	1.45E-05
$R_e$	4.34E+05	4.74E+05	1.19E+06	3.04E+05	5.22E+05	9.11E+05
$e/D_n$	1.01E-05	1.01E-05	1.01E-05	7.74E-06	7.74E-06	7.74E-06
$R_e^{0.9}$	1.18E+05	1.28E+05	2.93E+05	8.59E+04	1.40E+05	2.31E+05
F Log <sub>10</sub> Precalc	-4.29	-4.32	-4.65	-4.16	-4.37	-4.57
Square of Previous	18.41	18.70	21.63	17.32	19.06	20.88
F Approx.	1.36E-02	1.34E-02	1.16E-02	1.44E-02	1.31E-02	1.20E-02
$1/F^{1/2}$	8.58	8.65	9.30	8.32	8.73	9.14
$1/F^{1/2}$ Calc	8.56	8.63	9.30	8.30	8.71	9.13
$h_{f-DW}$	203.79	239.74	1294.87	48.09	129.30	359.02
$h_{e-n}$	0.00	0.00	0.00	0.00	0.00	0.00
$h_{s-n}$	0.00	0.00	0.00	0.00	0.00	0.00
$h_{v-n}$	2.48	2.97	18.54	0.72	2.12	6.46
$h_{f-HW}$	198.58	234.04	1274.93	46.31	126.31	353.50
TDH-HW	201.06	237.01	1293.47	47.03	128.44	359.96
TDH-DW	206.28	242.70	1313.41	48.81	131.42	365.48
HP <sub>Brake-HW</sub>	55.75	71.82	979.90	11.88	55.79	272.70
HP <sub>Brake-DW</sub>	57.20	73.55	995.01	12.33	57.08	276.88
Assumed total eff	0.65	0.65	0.65	0.65	0.65	0.65
HP <sub>HW</sub>	85.77	110.49	1507.54	18.27	85.82	419.54
HP <sub>DW</sub>	87.99	113.15	1530.78	18.96	87.82	425.97
Yds <sup>3</sup> /hr. (Production Rate)	32.62	35.65	89.13	29.71	51.10	89.13
10-Hr Days to Move .000 Yds <sup>3</sup> · 0.10 Solids*	76.64	70.13	28.05	84.15	48.92	28.05

**Port of Brookings-Harbor**  
**Calculation Sheet For 6" and 8", SDR 21 Pipeline, 120 hp**  
 by Jack Akin, MS, PE

Adjusted $h_{r-HW}$	278.01	327.66	1784.90	64.84	176.84	494.91
Adjusted $HP_{HW}^{**}$	119.65	154.14	2101.91	25.47	119.59	584.34
Adjusted $v_{50}$ (assumes 20% slurry)	1.84E-05	1.84E-05	1.84E-05	1.84E-05	1.84E-05	1.84E-05
Adjusted $R_e$	3.42E+05	3.73E+05	9.33E+05	2.39E+05	4.11E+05	7.17E+05
Adjusted $R_e^{0.9}$	9.55E+04	1.03E+05	2.36E+05	6.93E+04	1.13E+05	1.86E+05
Adjusted F Log <sub>10</sub> Precalc	-4.20E+00	-4.24E+00	-4.57E+00	-4.07E+00	-4.28E+00	-4.48E+00
Adjusted Square of Previous	17.66	17.94	20.87	16.57	18.29	20.09
Adjusted F Approx.	1.42E-02	1.39E-02	1.20E-02	1.51E-02	1.37E-02	1.24E-02
Adjusted $1/F^{1/2}$	8.40	8.47	9.14	8.14	8.55	8.97
Adjusted $1/F^{1/2}$ Calc	8.38	8.45	9.13	8.12	8.53	8.95
Adjusted $TDH_{DW}$	217.58	255.93	1380.14	51.73	139.09	386.24
Adjusted $HP_{DW}$	92.82	119.31	1608.56	20.10	92.94	450.16

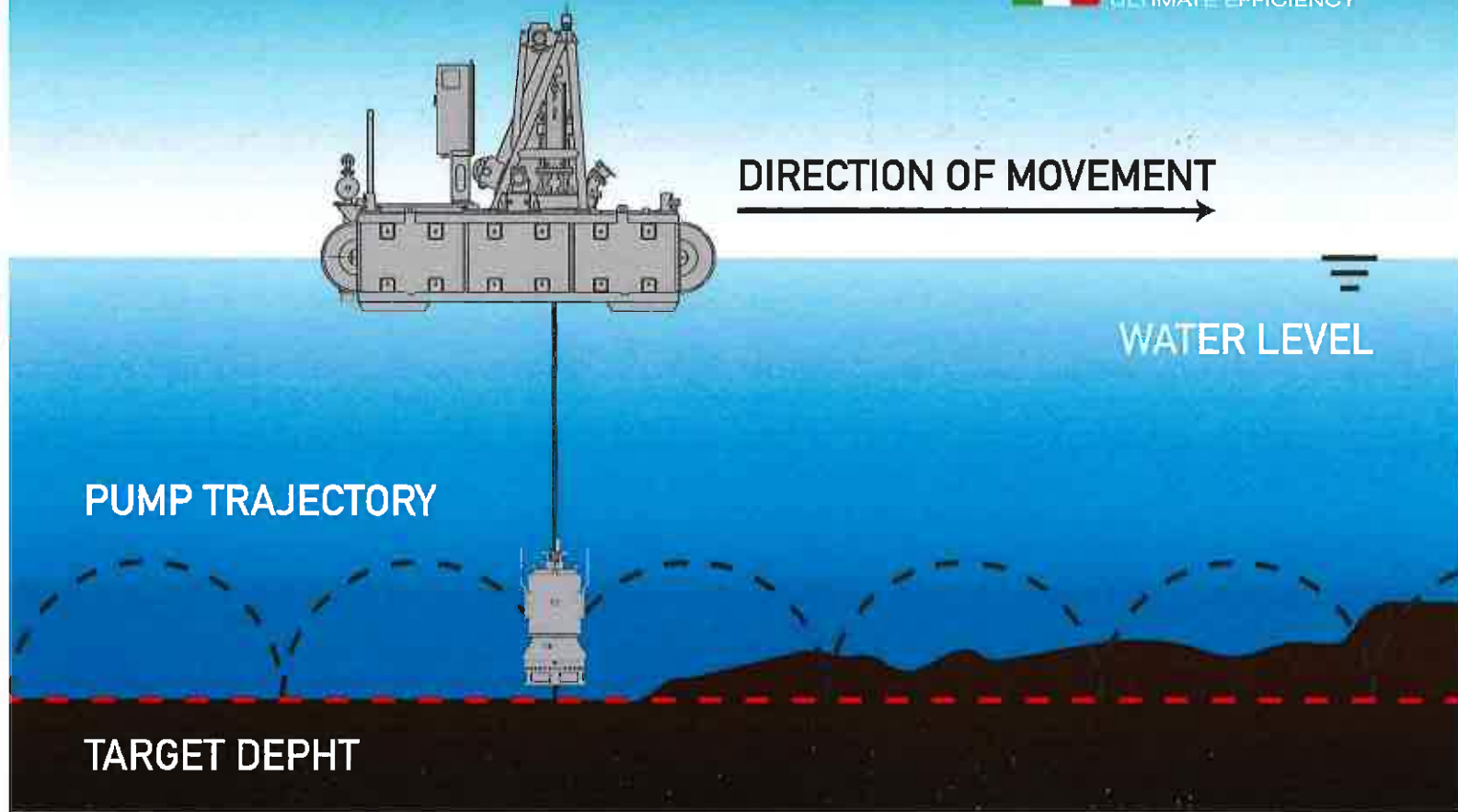
**Notes**

\* Production assumes 100% efficiency. The actual production rate and dredging period must be adjusted per project.

\*\* Safe recommended coefficient of 1.4 for various concentrations of slurry when using Hazen Williams.

Example: Automating depth and movement

**DRAGFLOW**  
ULTIMATE EFFICIENCY



**EXHIBIT E – Bathymetric Comparison  
to Investigate Shoaling Rates**



**Grants Pass \* Jacksonville \* Medford, OR**

GP Office: 1867 Williams Hwy., Suite 216, Grants Pass, OR, 97527

Jville Office: 450 Conestoga Dr., Jacksonville, OR, 97530

Ph: 541-474-9434 \* Cell: 541-261-9929 \* Fax 541-727-5488

emc@emcengineersscientists.com; <http://www.emcengineersscientists.com>

**- Engineers/Scientists, LLC**

7/10/19

Gary Dehlinger  
Manager, Port of Brookings Harbor

7/10/19

Travis  
Port of Brookings Harbor Harbormaster

**MEMO 7102019-1; 2019 Bathymetric Survey Results**

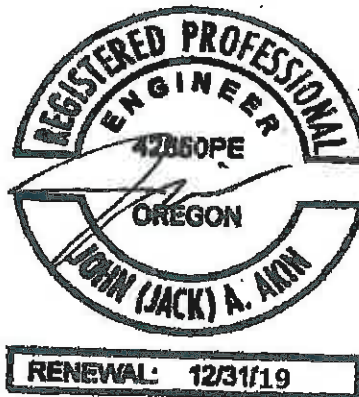
Attached are the key plans and volume calculations that indicate the volumes of sediments that have migrated into the Port of Brookings Harbor basins since shortly after the last major dredging event, which occurred in 2012, and that exists within the Port basins in 2019.

The bathymetric survey used to map out and compare 2013 volume levels with those in 2017 show a total volume increase of 16,683 yd.<sup>3</sup>. However, the most recently completed bathymetric survey has been mapped out, and its calculated volumes, utilizing the 2017 sediment elevations as its baseline, show a total sediment accumulation of 49,760 yd.<sup>3</sup>. If a standard averaging were to be used, the shoaling rate for the period between 2017 and 2019 can be estimated at approximately 24,880 yd.<sup>3</sup> per year. This shoaling rate, when compared with the normally expected rate of about 4500 yd.<sup>3</sup> per year, is dramatic, but not unexpected, based on observations that have been made in 2019.

As observed and previously estimated by EMC, it is believed that nearly all of 40,000 yd.<sup>3</sup> has accumulated within the Port basins due to storms and erosion from nearby wild fire residues on stream watersheds to the Port. Nevertheless, even a conservative and weighted value of 24,880 yd.<sup>3</sup> is about six times that which should be expected and have previously been observed to have shoaled into the Port basins.

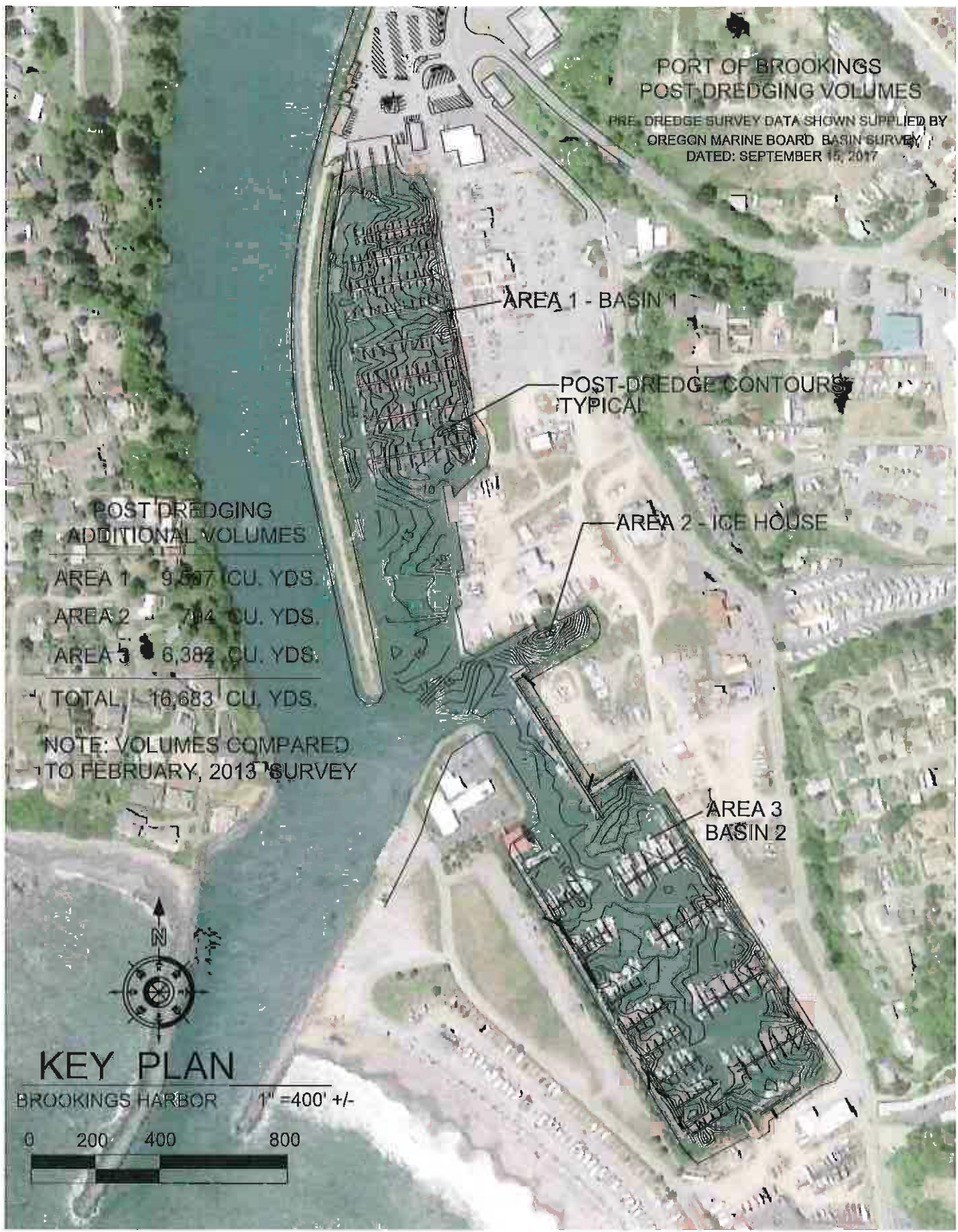
Sincerely

Jack (John) Akin, MS, PE, IC, HMS, CAI  
EMC-Engineers/Scientists, LLC



PORT OF BROOKINGS  
POST-DREDGING VOLUMES

PRE-DREDGE SURVEY DATA SHOWN SUPPLIED BY  
OREGON MARINE BOARD BASIN SURVEY  
DATED: SEPTEMBER 15, 2017



AREA 1 - BASIN 1

POST-DREDGE CONTOURS  
TYPICAL

AREA 2 - ICE HOUSE

AREA 3  
BASIN 2

POST DREDGING  
ADDITIONAL VOLUMES

- AREA 1 - 9,577 CU. YDS.
- AREA 2 - 704 CU. YDS.
- AREA 3 - 6,382 CU. YDS.

TOTAL - 16,683 CU. YDS.

NOTE: VOLUMES COMPARED  
TO FEBRUARY, 2013 SURVEY

KEY PLAN

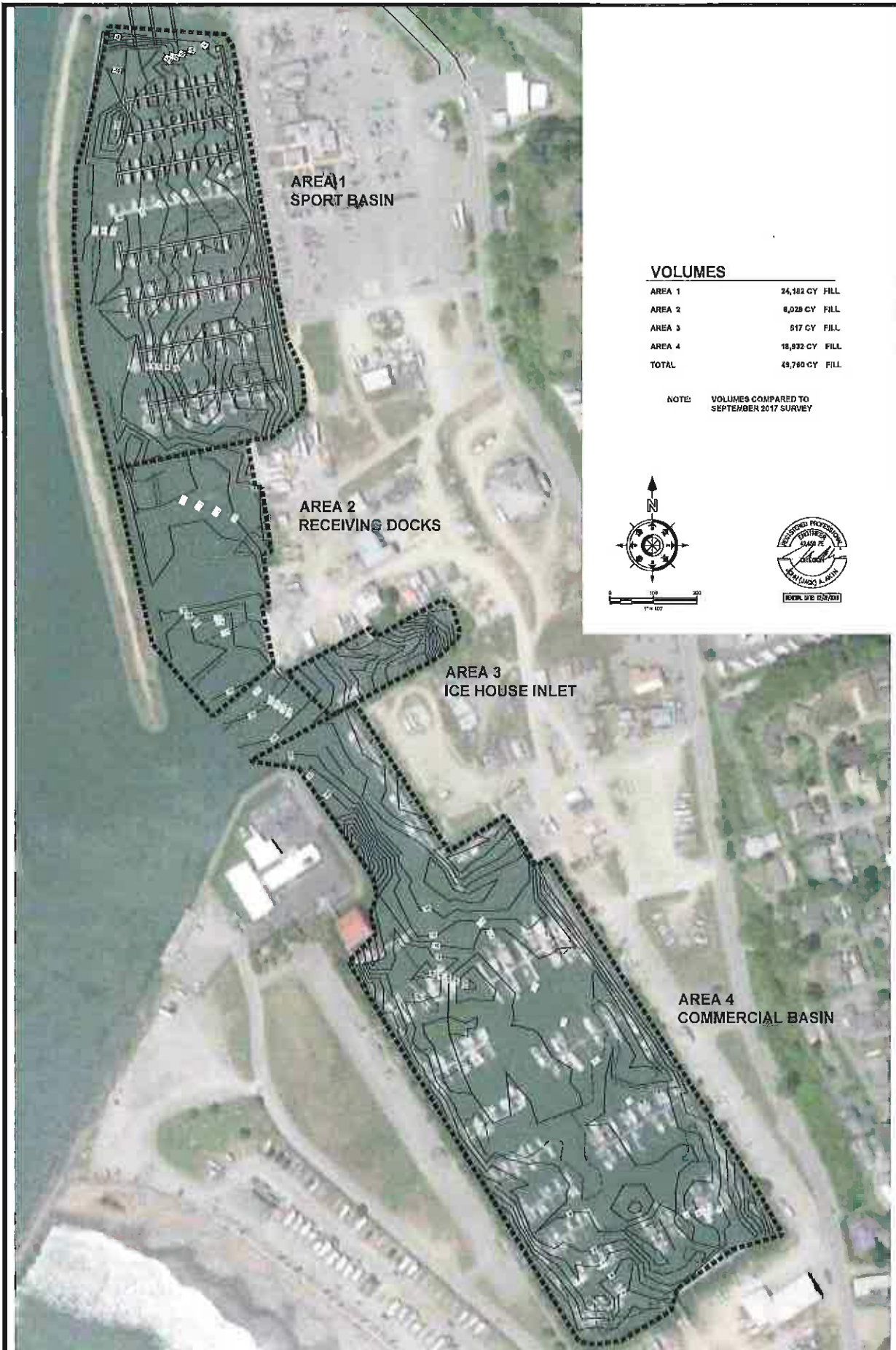
BROOKINGS HARBOR 1" = 400' +/-

0 200 400 800

09-15-17

SHEET 1 OF 1





AREA 1  
SPORT BASIN

AREA 2  
RECEIVING DOCKS

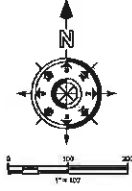
AREA 3  
ICE HOUSE INLET

AREA 4  
COMMERCIAL BASIN

**VOLUMES**

AREA 1	24,182 CY FILL
AREA 2	8,028 CY FILL
AREA 3	517 CY FILL
AREA 4	18,932 CY FILL
<b>TOTAL</b>	<b>48,760 CY FILL</b>

NOTE: VOLUMES COMPARED TO SEPTEMBER 2017 SURVEY



**EXHIBIT F – BCA Produced and  
Submitted for HMGP Funding Request**



# Benefit-Cost Calculator

V.6.0 (Build 20200819.1933)

## Benefit-Cost Analysis

**Project Name:** POBH Embankment Stabilization/Stormwater Protection



Map Marker	Mitigation Title	Property Type	Hazard	Benefits (B)	Costs (C)	BCR (B/C)
1	Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415_copy_copy_copy_copy	●●●	DFA - Severe Storm	\$ 7,446,159	\$ 4,302,140	1.73
2	Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415_copy_copy_copy_copy	●●●	DFA - Severe Storm	\$ 7,446,159	\$ 4,302,140	1.73
<b>TOTAL (SELECTED)</b>				<b>\$ 14,892,318</b>	<b>\$ 8,604,280</b>	<b>1.73</b>
<b>TOTAL</b>				<b>\$ 14,892,318</b>	<b>\$ 8,604,280</b>	<b>1.73</b>

Property Configuration	
Property Title:	Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415_copy_copy_copy_copy
Property Location:	97415, Curry, Oregon
Property Coordinates:	42.05127, -124.26676
Hazard Type:	Severe Storm
Mitigation Action Type:	Other
Property Type:	Other
Analysis Method Type:	Professional Expected Damages

Cost Estimation	
Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415_copy_copy_copy_copy	
Project Useful Life (years):	40
Project Cost:	\$4,258,897
Number of Maintenance Years:	40 Use Default:Yes
Annual Maintenance Cost:	\$14,167

Comments

•

**Project Useful Life:**

Not all work will last, without repair, for 40 years. Therefore note that for asphalt pavement construction, added ongoing expenses for periodic seal-coating and repair are added under Annual Maintenance Cost. Also, dredging having been done assumes subsequent normal sediment shoaling into the Port annually of 4500 cy. However, a 20% increase has been estimated from recent observations made by the engineer-of-record, which amounts to an additional 900 cy/yr., or 4500 cy/5 yrs. This amount over 40 years is placed under Damages After Mitigation in this BCA.

•

**Mitigation Project Cost:**

Please see the attached Project Budget Sheets (see attachments C-1, C-2 and C-3). These layout the three subprojects (Parking Lot, Roads & Storage; Boat Yard & Kite Field RV Park), with associated itemized cost estimates, totaling 1,858,897, which is the request from the HMGP (it may be that not enough funding via the HMGP is presently available, and so a PA request is also in process). This workbook contains three calculating sheets, the sheets are named "Parking Lot, Roads and Storage", "Boat Yard" and "Kite Field RV Park". In all three sheets the last column to the right, labeled "4452 HMGP", is that which is applicable to this project. So, for the sub-project "Parking Lot, Roads and Storage", the subtotal is \$546,805. The sub-project subtotal for the "Boat Yard" is \$812,828 The sub-project subtotal for the "Kite Field RV Park" is \$499,265. The total for all three of the sub-projects is \$1,858,897. This total is added to the previously submitted total for the declared disasters during February (4432-DR-OR) and April (4452-DR-OR) of 2019. Attached FEMA inspections (see attachments E-1a, E-1b & E-1c for background and copies of WO 45060 and WO 47755) were conducted on 9/20/2019. Damage assessment via sequential bathymetric survey and historical photography were submitted to FEMA. As of the date of this Report, the approval process is in ongoing. Further, recent publication and engineering study has identified wildfire-related erosion and sedimentation within the Port basins. Upland layering would be used to beneficially grade surfaces for protective paving. Paving is recommended to 1) stabilize embankment slopes and control erosive stormwater flows, and 2) mitigate issues associated with the environmental threat outlined below. Additionally, stormwater pollutants are found to be posing a threat to the environment,. Recent (1st and 2nd 1/4ly, 2020) ODEQ-required stormwater sampling has shown the release of pollutants being delivered to the waters of the State. To these are added previously applied for 4432 and 4452 funding requests. 4432 requests \$755,000 and 4452 \$1,710,000 for embankment repair and sediment removal. Since that request we have found alternative sediment handling that can reduce, and that beneficially, 4452 costs by \$125,000, that is; from \$1,770,000 to \$1,645,000, and thus the total from \$2,525,000 to \$2,400,000. As a result of declared disasters during February (4432-DR-OR) and April (4452-DR-OR) of 2019 the Port of Brookings Harbor petitioned for assistance via the HMGP. Attached FEMA inspections (WO 45060 and WO 47755) were conducted on 9/20/2019. Damage assessment via sequential bathymetric survey and historical photography were submitted to FEMA. As of the date of this Report, the approval process is in ongoing. The total of all requests would therefore be \$4,258,897 which is the total Project Cost Estimation used for this BCA. Also, referenced within the Project Budget Sheets are preliminary engineered drawings (attached as B-4 and B-5). These are not construction drawings. RE the attached preliminary drawings: These drawings, entitled HMGP-DR-4452, 2020 Improvements, include some master planning, most but not all of which are applicable to this Project. All of these drawings, notes, specifications are adequate for cost estimation and regulatory review, but are preliminary. Construction drawings will follow. The drawing package consists of 21 sheets. Sheet C1.0 is the cover sheet for the packet. 149

Sheet C1.1 contains applicable General Notes, Grading Notes, etc. Sheet C1.2 contains other Notes and several Sections, all of which are applicable to this Project. Sheet C1.3 is simply an overall plan view of Basin 2. Sheets C2.0, 2.1 and 2.2 contain Notes and ESCP Details that are applicable to this project. Sheet C3.0 is of the Kite field – RV Park, showing 25 concrete pads and vehicle parking for pull-through RV units. This drawing will be revised to accommodate a total of 15, rather than 25 units. Cut and fill volumes as shown on the sheet are still correct. On a preliminary basis. Construction drawings will be more accurate, as they will be based on field surveyed data, rather than the GIS data presently being used. Sheet C4.0 is a preliminary drawing showing the north roads and parking lot, along with dredge sediments cut and fill volumes. The storage buildings on Sheet C4.0, as well as the details on Sheets C4A & C4B, the photos on Sheet C4C do not pertain to this project. The top and profile views of the roads on Sheets C4 .1 through C4.6 are preliminary and applicable, but must be revised for construction drawings after professional survey or data is obtained. Sheet C5.0 shows the Boat Yard with planned cut and fill estimates, applicable to this project. Sheet C6.0 provides pre-design cross sections and Notes as specified by the engineer-of-record for wheel stops, curb with taper, conduit trenching, sewer trenching, concrete sidewalk, vertical curbing, curb and gutter, rolled curbing, control Joints, water and joint trenching, driveway guttering, typical clean outs, storm manholes, catch and junction basin details, all of which are applicable to this project. Under the newly obtained ODEQ 1200-Z Industrial Stormwater Permit, the Port completed its first two water sampling events and the laboratory results show considerable exceedances. The 5-14-20 Stormwater Review and Recommendations and POBH SWPCP for reference (see attached D-4a and D-4b) indicate that dirt/gravel roads, gear storage and boat yard facilities contribute to the non-compliant total suspended solids and regulated metals. Needed stormwater control as would be provided via paved surfaces directed to catch basins with Best Management practices.

**Annual Maintenance Cost:**

Proposed improvements (cut/fill, paving, embankment repair & stabilization) will decrease maintenance requirements. At present unpaved areas and unstable slopes must be routinely, temporarily repaired. Assuming a rigorous sealcoating schedule every three years, annual paved road and parking lot maintenance costs may be conservatively estimated at \$14,167/yr.

Damage Analysis Parameters - Damage Frequency Assessment  
 Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415\_copy\_copy\_copy\_copy

<b>Year of Analysis Conducted:</b>	2020
<b>Year Property was Built:</b>	1978
<b>Analysis Duration:</b>	43 Use Default:Yes

Professional Expected Damages Before Mitigation  
 Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415\_copy\_copy\_copy\_copy

Recurrence Interval (years)	OTHER	OPTIONAL DAMAGES			VOLUNTEER COSTS		TOTAL
	Damages (\$)	Category 1 (\$)	Category 2 (\$)	Category 3 (\$)	Number of Volunteers	Number of Days	Damages (\$)
8	2,525,000	0	0	0	0	0	3,550,000
1	95,758	0	0	0	0	0	95,758

150

Comments

- 

**Damages Before Mitigation:**

Expected Damages are considered to be the cost of damage repair to restore action areas to their original condition (\$2,525,000). This budget has been submitted to FEMA via DR 4432 and 4452. An 8-yr. recurrence is deemed reasonable because, as noted in the attached Special Districts 2018 POBH NHMP (see attachment F-1, P13, Gen. SW Drainage, and P14, Embankments), degradation due to flood and storm damage is accelerating. Ongoing erosion and structural damage to Port, as seen from repairs required due to storm/flood damages in the last eight (8) years total, not including that caused by the 2011 tsunami, \$4,645,000 (\$120k+\$280k+\$650k+\$3595k), is shown in the Application, Section 3.1.5, Table. Attached engineering reports for these disasters over the last eight years are, respectively, GeoDesign Engineering Report and accompanying Overall Map of Slides; POBH Dock Failure Preliminary Reports-1 and 2; 3-24-17 Sport Basin Boardwalk Memo and, the most recent submitted 4432 and 4452 application; (WO 45060 & WO 47755 attached for the convenience of the reader). Projects not being done at present, that are already in-progress or have already been completed are not included in this BCA, except to support the overall periodicity of severe storm/erosive damages. RE required annual stormwater treatment as a result of newly discovered Port NPDES (1200-Z) non-compliance: Bioretention areas, swales, channels, detention areas, sand filters, gravity separators, dry wells, trenches, stormwater ponds, pavers, porous concrete, rain harvesting, and stormwater wetlands were reviewed. Swales, retention areas, trenches, ponds, harvesting and stormwater wetlands are not feasible due to limited treatment areas and high flows. R-D-I 50 for the Brookings area w/ Tc (3-6 minutes) estimated at 4.0. High intensity storms in the area require a coefficient adjustment of 1.2. The total volume of stormwater produced by the 18 acres area produces 73.34 ft.<sup>3</sup>/s, or about 32,917 GPM. Estimated stormwater treatment costs/yr., based on previous work reviewed by EMC, to treat to benchmark concentrations is about \$2.91/GPM/season. Attached is the 5-14-20 Stormwater Review and Recommendations, and the POBH SWPCP for reference. (Note: Reviewer can see all attached documents, spreadsheets, drawings citations in the "Attachment Index" Table in the Application.)

Annualized Damages Before Mitigation  
Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415\_copy\_copy\_copy\_copy

Annualized Recurrence Interval (years)	Damages and Losses (\$)	Annualized Damages and Losses (\$)
1	95,758	510,164
8	3,550,000	443,750
	Sum Damages and Losses (\$)	Sum Annualized Damages and Losses (\$)
	3,645,758	953,914

Professional Expected Damages After Mitigation  
Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415\_copy\_copy\_copy\_copy

Recurrence Interval (years)	OTHER	OPTIONAL DAMAGES			VOLUNTEER COSTS		TOTAL
	Damages (\$)	Category 1 (\$)	Category 2 (\$)	Category 3 (\$)	Number of Volunteers	Number of Days	Damages (\$)
5	1,282,500	0	0	0	0	0	1,282,500
1	23,500	0	0	0	0	0	23,500

Comments

**Damages After Mitigation:**

A recent bathymetric survey analyses was performed by the Port showing elevated shoaling rates, attributable to recent wildfires above the Chetco watershed. It is attached, entitled Memo RE Elevated 2017-2019 Shoaling Rates. The narrative examines recent shoaling rates as about six times that of average experienced at the Port. However, this phenomenon can not be predicted via available research. A 20% increase has been estimated from recent observations made by the engineer-of-record, which amounts to an additional 900 cy/yr., or 4500 cy/5 yrs. Therefore the average rate of 4500 cy sediment/yr. is used in this analysis. The dredging estimate of \$57/cy, disposed to EPA-managed ocean unit, is conservatively used. This volume is funded via Port resources. Paving and embankment repair are included in the maintenance cost/yr section of this analysis. Stormwater treatment to obtain acceptable levels will be greatly diminished by separating stormwater from Port soils, but not entirely diminished. Final polishing will likely be required at Gear Storage # 1 and Boat Yard. Filtering is estimated to cost about \$12,750 per outfall/year for the two outfalls.

Annualized Damages After Mitigation

Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415\_copy\_copy\_copy\_copy

Annualized Recurrence Interval (years)	Damages and Losses (\$)	Annualized Damages and Losses (\$)
1	23,500	138,884
5	1,282,500	256,500
	Sum Damages and Losses (\$)	Sum Annualized Damages and Losses (\$)
	1,306,000	395,384

Benefits-Costs Summary

Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415\_copy\_copy\_copy\_copy

Total Standard Mitigation Benefits:	\$7,446,159
Total Additional Benefits - Social:	\$0
Total Additional Benefits - Ecosystem Services:	\$0
Total Mitigation Project Benefits:	\$7,446,159
Total Mitigation Project Cost:	\$4,302,140
Benefit Cost Ratio - Standard:	1.73
Benefit Cost Ratio - Standard + Additional:	1.73

152



Property Configuration	
Property Title:	Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415_copy_copy_copy_copy
Property Location:	97415, Curry, Oregon
Property Coordinates:	42.05127, -124.26676
Hazard Type:	Severe Storm
Mitigation Action Type:	Other
Property Type:	Other
Analysis Method Type:	Professional Expected Damages

Cost Estimation	
Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415_copy_copy_copy_copy	
Project Useful Life (years):	40
Project Cost:	\$4,258,897
Number of Maintenance Years:	40 Use Default:Yes
Annual Maintenance Cost:	\$14,167

Comments

- 

**Project Useful Life:**

Not all work will last, without repair, for 40 years. Therefore note that for asphalt pavement construction, added ongoing expenses for periodic seal-coating and repair are added under Annual Maintenance Cost. Also, dredging having been done assumes subsequent normal sediment shoaling into the Port annually of 4500 cy. However, a 20% increase has been estimated from recent observations made by the engineer-of-record, which amounts to an additional 900 cy/yr., or 4500 cy/5 yrs. This amount over 40 years is placed under Damages After Mitigation in this BCA.

- 

**Mitigation Project Cost:**

Please see the attached Project Budget Sheets (see attachments C-1, C-2 and C-3). These layout the three subprojects (Parking Lot, Roads & Storage; Boat Yard & Kite Field RV Park), with associated itemized cost estimates, totaling 1,858,897, which is the request from the HMGP (it may be that not enough funding via the HMGP is presently available, and so a PA request is also in process). This workbook contains three calculating sheets, the sheets are named "Parking Lot, Roads and Storage", "Boat Yard" and "Kite Field RV Park". In all three sheets the last column to the right, labeled "4452 HMGP", is that which is applicable to this project. So, for the sub-project "Parking Lot, Roads and Storage", the subtotal is \$546,805. The sub-project subtotal for the "Boat Yard" is \$812,828 The sub-project subtotal for the "Kite Field RV Park" is \$499,265. The total for all three of the sub-projects is \$1,858,897. This total is added to the previously submitted total for the declared disasters during February (4432-DR-OR) and April (4452-DR-OR) of 2019. Attached FEMA inspections (see attachments E-1a, E-1b & E-1c for background and copies of WO 45060 and WO 47755) were conducted on 9/20/2019. Damage assessment via sequential bathymetric survey and historical photography were submitted to FEMA. As of the date of this Report, the approval process is in ongoing. Further, recent publication and engineering study has identified wildfire-related erosion and sedimentation within the Port basins. Upland layering would be used to beneficially grade surfaces for protective paving. Paving is recommended to 1) stabilize embankment slopes and control erosive stormwater flows, and 2) mitigate issues associated with the environmental threat outlined below. Additionally, stormwater pollutants are found to be posing a threat to the environment. Recent (1st and 2nd 1/4ly, 2020) ODEQ-required stormwater sampling has shown the release of pollutants being delivered to the waters of the State. To these are added previously applied for 4432 and 4452 funding requests. 4432 requests \$755,000 and 4452 \$1,710,000 for embankment repair and sediment removal. Since that request we have found alternative sediment handling that can reduce, and that beneficially, 4452 costs by \$125,000, that is; from \$1,770,000 to \$1,645,000, and thus the total from \$2,525,000 to \$2,400,000. As a result of declared disasters during February (4432-DR-OR) and April (4452-DR-OR) of 2019 the Port of Brookings Harbor petitioned for assistance via the HMGP. Attached FEMA inspections (WO 45060 and WO 47755) were conducted on 9/20/2019. Damage assessment via sequential bathymetric survey and historical photography were submitted to FEMA. As of the date of this Report, the approval process is in ongoing. The total of all requests would therefore be \$4,258,897 which is the total Project Cost Estimation used for this BCA. Also, referenced within the Project Budget Sheets are preliminary engineered drawings (attached as B-4 and B-5). These are not construction drawings. RE the attached preliminary drawings: These drawings, entitled HMGP-DR-4452, 2020 Improvements, include some master planning, most but not all of which are applicable to this Project. All of these drawings, notes, specifications are adequate for cost estimation and regulatory review, but are preliminary. Construction drawings will follow. The drawing package consists of 21 sheets. Sheet C1.0 is the cover sheet for the packet. 154

Sheet C1.1 contains applicable General Notes, Grading Notes, etc. Sheet C1.2 contains other Notes and several Sections, all of which are applicable to this Project. Sheet C1.3 is simply an overall plan view of Basin 2. Sheets C2.0, 2.1 and 2.2 contain Notes and ESCP Details that are applicable to this project. Sheet C3.0 is of the Kite field – RV Park, showing 25 concrete pads and vehicle parking for pull-through RV units. This drawing will be revised to accommodate a total of 15, rather than 25 units. Cut and fill volumes as shown on the sheet are still correct. On a preliminary basis. Construction drawings will be more accurate, as they will be based on field surveyed data, rather than the GIS data presently being used. Sheet C4.0 is a preliminary drawing showing the north roads and parking lot, along with dredge sediments cut and fill volumes. The storage buildings on Sheet C4.0, as well as the details on Sheets C4A & C4B, the photos on Sheet C4C do not pertain to this project. The top and profile views of the roads on Sheets C4 .1 through C4.6 are preliminary and applicable, but must be revised for construction drawings after professional survey or data is obtained. Sheet C5.0 shows the Boat Yard with planned cut and fill estimates, applicable to this project. Sheet C6.0 provides pre-design cross sections and Notes as specified by the engineer-of-record for wheel stops, curb with taper, conduit trenching, sewer trenching, concrete sidewalk, vertical curbing, curb and gutter, rolled curbing, control Joints, water and joint trenching, driveway guttering, typical clean outs, storm manholes, catch and junction basin details, all of which are applicable to this project. Under the newly obtained ODEQ 1200-Z Industrial Stormwater Permit, the Port completed its first two water sampling events and the laboratory results show considerable exceedances. The 5-14-20 Stormwater Review and Recommendations and POBH SWPCP for reference (see attached D-4a and D-4b) indicate that dirt/gravel roads, gear storage and boat yard facilities contribute to the non-compliant total suspended solids and regulated metals. Needed stormwater control as would be provided via paved surfaces directed to catch basins with Best Management practices.

**Annual Maintenance Cost:**

Proposed improvements (cut/fill, paving, embankment repair & stabilization) will decrease maintenance requirements. At present unpaved areas and unstable slopes must be routinely, temporarily repaired. Assuming a rigorous sealcoating schedule every three years, annual paved road and parking lot maintenance costs may be conservatively estimated at \$14,167/yr.

Damage Analysis Parameters - Damage Frequency Assessment  
 Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415\_copy\_copy\_copy\_copy\_copy

<b>Year of Analysis Conducted:</b>	2020
<b>Year Property was Built:</b>	1978
<b>Analysis Duration:</b>	43 Use Default:Yes

Professional Expected Damages Before Mitigation  
 Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415\_copy\_copy\_copy\_copy\_copy

Recurrence Interval (years)	OTHER	OPTIONAL DAMAGES			VOLUNTEER COSTS		TOTAL
	Damages (\$)	Category 1 (\$)	Category 2 (\$)	Category 3 (\$)	Number of Volunteers	Number of Days	Damages (\$)
8	2,525,000	0	0	0	0	0	3,550,000
1	95,758	0	0	0	0	0	95,758

155

Comments

**Damages Before Mitigation:**

Expected Damages are considered to be the cost of damage repair to restore action areas to their original condition (\$2,525,000). This budget has been submitted to FEMA via DR 4432 and 4452. An 8-yr. recurrence is deemed reasonable because, as noted in the attached Special Districts 2018 POBH NHMP (see attachment F-1, P13, Gen. SW Drainage, and P14, Embankments), degradation due to flood and storm damage is accelerating. Ongoing erosion and structural damage to Port, as seen from repairs required due to storm/flood damages in the last eight (8) years total, not including that caused by the 2011 tsunami, \$4,645,000 (\$120k+\$280k+\$650k+\$3595k), is shown in the Application, Section 3.1.5, Table. Attached engineering reports for these disasters over the last eight years are, respectively, GeoDesign Engineering Report and accompanying Overall Map of Slides; POBH Dock Failure Preliminary Reports-1 and 2; 3-24-17 Sport Basin Boardwalk Memo and, the most recent submitted 4432 and 4452 application; (WO 45060 & WO 47755 attached for the convenience of the reader). Projects not being done at present, that are already in-progress or have already been completed are not included in this BCA, except to support the overall periodicity of severe storm/erosive damages. RE required annual stormwater treatment as a result of newly discovered Port NPDES (1200-Z) non-compliance: Bioretention areas, swales, channels, detention areas, sand filters, gravity separators, dry wells, trenches, stormwater ponds, pavers, porous concrete, rain harvesting, and stormwater wetlands were reviewed. Swales, retention areas, trenches, ponds, harvesting and stormwater wetlands are not feasible due to limited treatment areas and high flows. R-D-I 50 for the Brookings area w/ Tc (3-6 minutes) estimated at 4.0. High intensity storms in the area require a coefficient adjustment of 1.2. The total volume of stormwater produced by the 18 acres area produces 73.34 ft.<sup>3</sup>/s, or about 32,917 GPM. Estimated stormwater treatment costs/yr, based on previous work reviewed by EMC, to treat to benchmark concentrations is about \$2.91/GPM/season. Attached is the 5-14-20 Stormwater Review and Recommendations, and the POBH SWPCP for reference. (Note: Reviewer can see all attached documents, spreadsheets, drawings citations in the "Attachment Index" Table in the Application.)

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	<b>Sum Damages and Losses (\$)</b>	<b>Sum Annualized Damages and Losses (\$)</b>
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Professional Expected Damages After Mitigation  
Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415\_copy\_copy\_copy\_copy\_copy

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	Damages (\$)	Category 1 (\$)	Category 2 (\$)	Category 3 (\$)	Number of Volunteers	Number of Days	Damages (\$)
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1	23,500	0	0	0	0	0	23,500

156

Comments

**Damages After Mitigation:**

A recent bathymetric survey analyses was performed by the Port showing elevated shoaling rates, attributable to recent wildfires above the Chetco watershed. It is attached, entitled Memo RE Elevated 2017-2019 Shoaling Rates. The narrative examines recent shoaling rates as about six times that of average experienced at the Port. However, this phenomenon can not be predicted via available research. A 20% increase has been estimated from recent observations made by the engineer-of-record, which amounts to an additional 900 cy/yr., or 4500 cy/5 yrs. Therefore the average rate of 4500 cy sediment/yr. is used in this analysis. The dredging estimate of \$57/cy, disposed to EPA-managed ocean unit, is conservatively used. This volume is funded via Port resources. Paving and embankment repair are included in the maintenance cost/yr section of this analysis. Stormwater treatment to obtain acceptable levels will be greatly diminished by separating stormwater from Port soils, but not entirely diminished. Final polishing will likely be required at Gear Storage # 1 and Boat Yard. Filtering is estimated to cost about \$12,750 per outfall/year for the two outfalls.

Annualized Damages After Mitigation

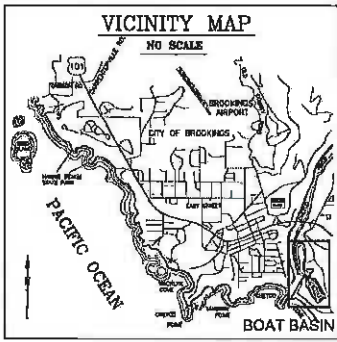
Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415\_copy\_copy\_copy\_copy\_copy

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Benefits-Costs Summary

Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415\_copy\_copy\_copy\_copy\_copy

Total Standard Mitigation Benefits:	\$7,446,159
Total Additional Benefits - Social:	\$0
Total Additional Benefits - Ecosystem Services:	\$0
Total Mitigation Project Benefits:	\$7,446,159
Total Mitigation Project Cost:	\$4,302,140
Benefit Cost Ratio - Standard:	1.73
Benefit Cost Ratio - Standard + Additional:	1.73



PORT  
OF  
BROOKINGS  
HARBOR



PORT OF BROOKINGS-HARBOR  
2021 CIVIL IMPROVEMENTS

**SEDIMENT STOCKPILE  
LOCATION #2**

**NATURAL FEATURES**

EXISTING NATURAL RESOURCES OR NATURAL HAZARDS ON THE SUBJECT PROPERTY, INCLUDING WETLANDS, STREAMS, RIPARIAN AREAS, FLOOD PLAINS, OR FLOODWAYS TO BE DETERMINED BY ENGINEER

**EXISTING TREE CANOPY**

THERE ARE NO EXISTING TREES ON THE SUBJECT PROPERTY

**CULTURAL RESOURCES**

LOCALLY, OR FEDERALLY DESIGNATED HISTORIC AND/OR CULTURAL RESOURCES ON THE SITE OR ON ADJACENT PARCELS TO BE DETERMINED BY ENGINEER.

**PUBLIC SERVICES**

PUBLIC UTILITY SERVICES, INCLUDING WATER, SEWER, STORM DRAINAGE, POWER, TELEPHONE, CABLE INTERNET, AND GAS ARE AVAILABLE TO THE SUBJECT PROPERTY.

**UTILITY STATEMENT**

EXISTING UNDERGROUND UTILITIES ILLUSTRATED IN THESE PLANS ARE APPROXIMATED BASED ON MAPS OBTAINED FROM CURRY COUNTY GIS ELEVATIONS ESTIMATES, OR HAVE BEEN LOCATED BY A UTILITY LOCATE COMPANY. LAYOUT INDICATED IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. ALL LINES WITHIN PROJECTED WORK ZONE SHALL BE FIELD VERIFIED AS REQUIRED PRIOR TO CONSTRUCTION.

**PROJECT DESCRIPTION**

TITLE: SEDIMENT STOCKPILE  
REFERENCE: PB114  
LOCATION: HARBOR ST  
TAX LOT(S): 2500

**DRAWING REGISTER**

PB114-C100 COVER SHEET  
PB114-C101 GRADING NOTES  
PB114-C102 EXISTING CONDITIONS  
PB114-C103 PROPOSED SEDIMENT STOCKPILE



PROJECT OVERVIEW  
SCALE 1":100'



PORT OF BROOKINGS HARBOR  
MAP OF TAX LOTS

**PRELIM GRADING NOTES**

1. DEQ 1200-C PERMIT IS REQUIRED.
2. UNLESS DIRECTED OTHERWISE, REMOVE CLEARED AND GRUBBED MATERIAL FROM THE SITE AND DISPOSE AT AN APPROVED LOCATION.
3. PRIOR TO THE START OF CONSTRUCTION, VERIFY GRADES AT SAWCUT LOCATIONS AND MATCHING OF EXISTING GRADE LOCATIONS.
4. MINIMIZE TRAFFIC ON SOIL AREAS DURING WET WEATHER. IF THE SITE SOILS ARE EXPOSED DURING WET WEATHER, THE USE OF CRUSHED ROCK PLACED AS ENGINEERED FILL IN THE BOTTOM OF THE EXCAVATIONS MAY BE NECESSARY TO PROTECT THE SUBGRADE. TAKE ALL PRECAUTIONS TO LIMIT SURFACE DISTURBANCE AND PROTECT THE SITE GRADING AREA FROM EROSION AND RUNOFF.
5. UNLESS OTHERWISE NOTED, THE SAMPLING AND TESTING OF MATERIALS FOR USE ON THE JOBSITE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. ALL TESTING OF MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY A CERTIFIED TESTER. RESULTS OF THE TESTS SHALL BE SENT DIRECTLY TO THE PROJECT ENGINEER AS WELL AS THE CONTRACTOR, BY THE LABORATORY. LOCATION AND FREQUENCY OF TESTS SHALL BE DESIGNATED BY THE GENERAL CONTRACTOR.
6. ALL CUT AND FILL SLOPES SHALL BE MAXIMUM OF 2:1.

LEGEND	
5	ELEVATION
---	SUBGRADE MINOR CONTOUR
---	SUBGRADE MAJOR CONTOUR
---	PARCEL
---	GEOTEXTILE
■	CONCRETE PAD
■	GRASS
■	JETTY
■	SLIP WAY
■	PAVED ROAD

ENGINEER:



PREPARED FOR:  
**PORT OF BROOKINGS**  
16230 Lower Harbor Rd, Brookings, OR 97415

Date 04/04/2021

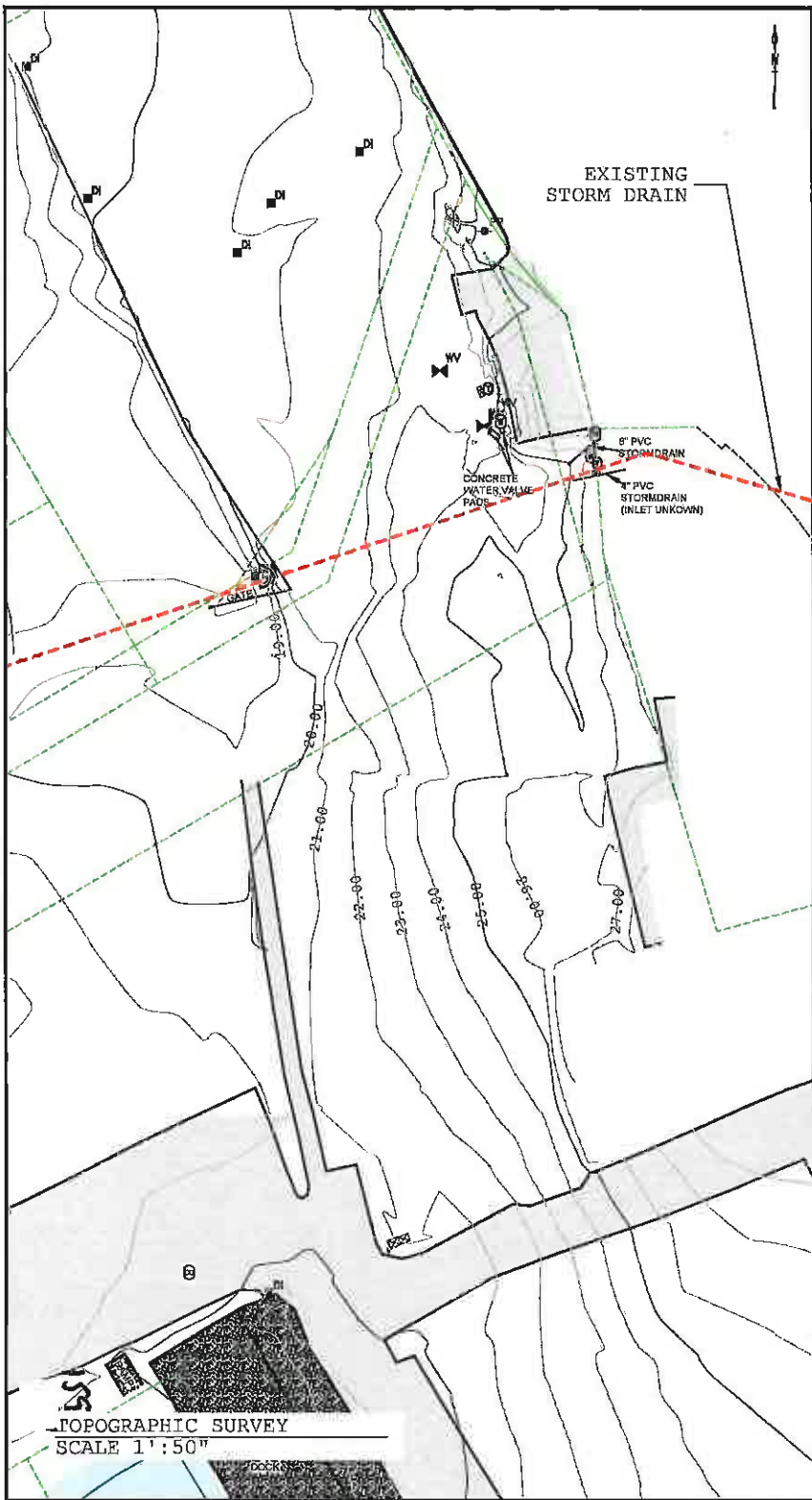
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Sheet No. C-100

File No. PB114



158



TOPOGRAPHIC SURVEY  
SCALE 1"=50'

**GRADING NOTES**

1. PRIOR TO THE CONSTRUCTION OF EMBANKMENTS, THE CONTRACTOR SHALL EXCAVATE UNSUITABLE FOUNDATION MATERIAL. BASEMENTS, TRENCHES AND HOLES ENCOUNTERED WITHIN EMBANKMENT LIMITS SHALL BE FILLED WITH APPROVED MATERIAL. PRIOR TO BACKFILLING THE CONTRACTOR SHALL BREAK CONCRETE FLOORS OF BASEMENTS AS DIRECTED. THE CONTRACTOR SHALL BREAK UP AND ROUGHEN THE GROUND SURFACE BEFORE EMBANKMENTS MATERIAL IS PLACED THE NATURAL GROUND UNDERLYING EMBANKMENTS SHALL BE COMPACTED TO THE DENSITY SPECIFIED FOR THE EMBANKMENT MATERIALS TO BE PLACED, AND TO THE DEPTH OF THE GRUBBING OR A MINIMUM OF 6 INCHES.
2. EMBANKMENT CONSTRUCTION SHALL INCLUDE PREPARATION OF THE AREAS UPON WHICH EMBANKMENTS ARE PLACED, THE PLACEMENT AND COMPACTION OF APPROVED EMBANKMENT MATERIALS AND FILLING OF HOLES, PITS AND OTHER DEPRESSIONS WITHIN THE SUBDIVISION.
3. THE CONTRACTOR SHALL PLACE EMBANKMENTS AND FILLS IN THE HORIZONTAL LAYERS OF 8 INCHES MAXIMUM DEPTH AND COMPACT EACH LAYER TO THE DENSITY SPECIFIED.
4. EMBANKMENT SHALL NOT BE CONSTRUCTED WHEN THE EMBANKMENT MATERIAL OR THE FOUNDATION ON WHICH THE EMBANKMENT WOULD BE PLACED IS FROZEN.
5. IMMEDIATELY PRIOR TO COMPLETION OF THE EARTHWORK, THE CONTRACTOR SHALL CLEAN THE ENTIRE WORK AREA OF DEBRIS AND FOREIGN MATTER.
6. THE MAXIMUM DENSITY OF COMPACTED MATERIAL WILL BE DETERMINED BY AASHTO T-99
7. THE CONTRACTOR SHALL COMPACT ALL EMBANKMENTS, FILLS AND BACKFILLS TO A MINIMUM IN PLACE DENSITY OF 95 PERCENT.
8. THE CONTRACTOR SHALL WATER THE MATERIALS TO PROVIDE OPTIMUM MOISTURE FOR COMPACTION OF EMBANKMENT AND BACKFILLS. EMBANKMENTS OD BACKFILL MATERIALS SHALL NOT BE PLACED IN FINAL POSITION UNTIL MOISTURE IN EXCESS OF OPTIMUM MOISTURE HAS BEEN REMOVED.
9. IF THE SPECIFIED COMPACTION IS NOT OBTAINED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER. THE CONTRACTOR MAY BE REQUIRED TO USE A MODIFIED COMPACTION PROCEDURE OR APPLY ADDITIONAL COMPACTIVE EFFORT. IF APPROVED MATERIALS MEETING THE SPECIFICATIONS CANNOT BE COMPACTED TO THE REQUIRED DENSITY REGARDLESS OF COMPACTIVE EFFORT OR METHOD, THE ENGINEER MAY REDUCE THE REQUIRED DENSITY OR DIRECT THE ALTERNATE MATERIALS BE USED. IN NO CASE SHALL EARTHWORK OPERATIONS PROCEED UNTIL THE CONTRACTOR IS ABLE TO COMPACT THE MATERIAL TO THE SATISFACTION OF THE ENGINEER.
10. DEQ 1200-C PERMIT IS NOT REQUIRED.
11. UNLESS DIRECTED OTHERWISE, REMOVE CLEARED AND GRUBBED MATERIAL FROM THE SITE AND DISPOSE AT AN APPROVED LOCATION.
12. UNLESS OTHERWISE NOTED, THE SAMPLING AND TESTING OF MATERIALS FOR USE ON THE JOBSITE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. ALL TESTING OF MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY A CERTIFIED TESTER. RESULTS OF THE TESTS SHALL BE SENT DIRECTLY TO THE PROJECT ENGINEER AS WELL AS THE CONTRACTOR, BY THE LABORATORY. LOCATION AND FREQUENCY OF TESTS SHALL BE DESIGNATED BY THE GENERAL CONTRACTOR.
13. ALL CUT AND FILL SLOPES SHALL BE MAXIMUM OF 2:1.

**GEOTECHNICAL NOTE**

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE PROJECT ENGINEER FOR REQUIRED REMEDIATION. THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT ENGINEER FOR REQUIRED SITE OBSERVATIONS AND TESTING OF ALL FILLS.

ENGINEER: 

NO.	DATE	BY	REVISION

  
 PORT OF BROOKINGS  
 16230 Lower Harbor Rd., Brookings, OR 97415

PREPARED FOR: (LOT 2800, MAP 38052208)  
**PORT OF BROOKINGS**  
 16230 Lower Harbor Rd., Brookings, OR 97415

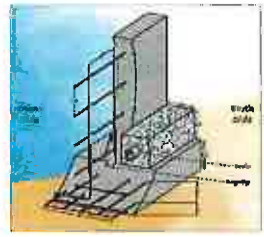
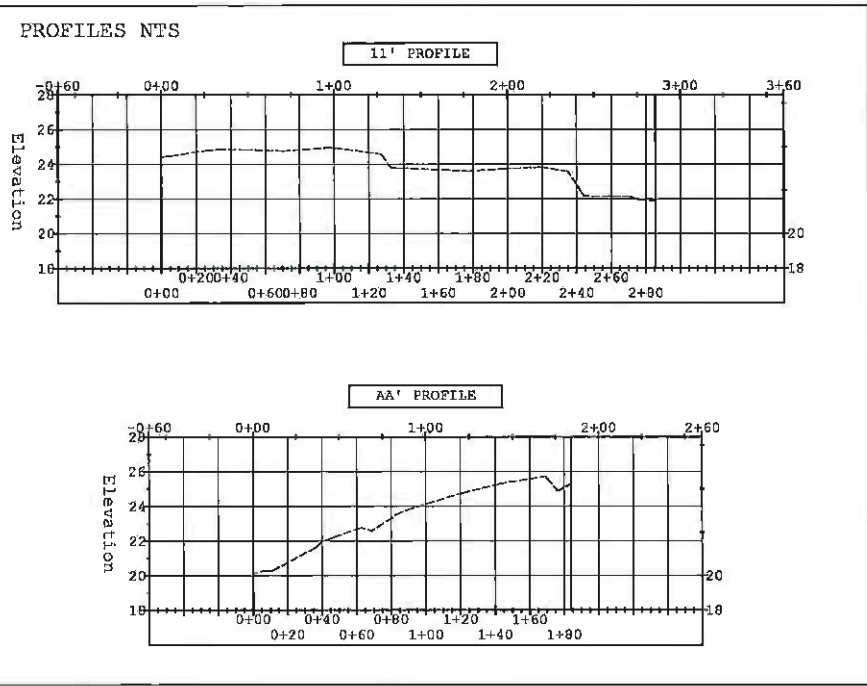
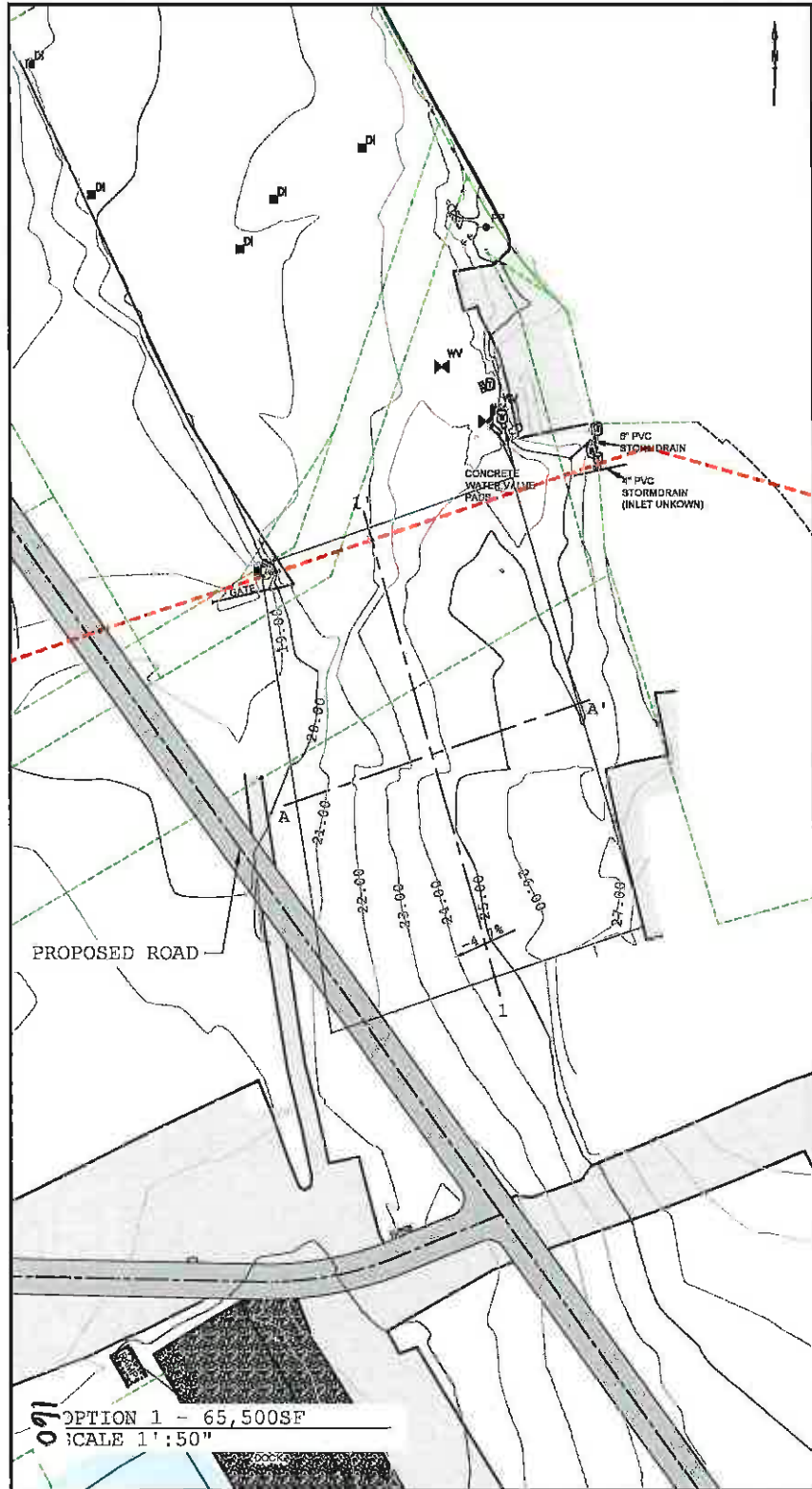
Date	04/04/2021
Drawn By	INFRADRAFT
Sheet No.	C-101
File No.	PB114



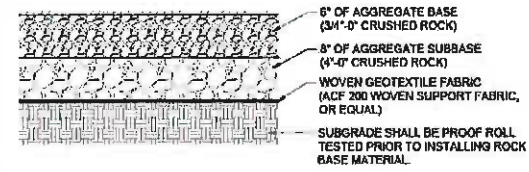
# NEW SEDIMENT STORAGE AREA

AREA: 45,185SF

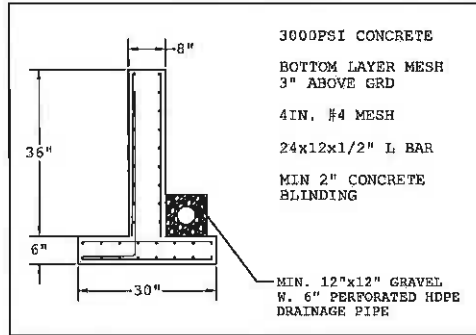
APPROX. STORAGE CAPACITY  
7,350 cu.yards



RETAINING WALL  
DETAIL NTS



SUB-GRADE  
PREPARATION DETAIL



REINFORCED CONCRETE  
RETAINING WALL DETAIL

OPTION 1 - 65,500SF  
SCALE 1"=50'

ENGINEER: **EMC**

PREPARED FOR: (LOT 2800, MAP 360320B5)

**PORT OF BROOKINGS**  
16330 Lower Harbor Rd, Brookings, OR 97415

Date: 04/04/2021

Drawn By: INFRADRAFT








Sheet No.: C-102

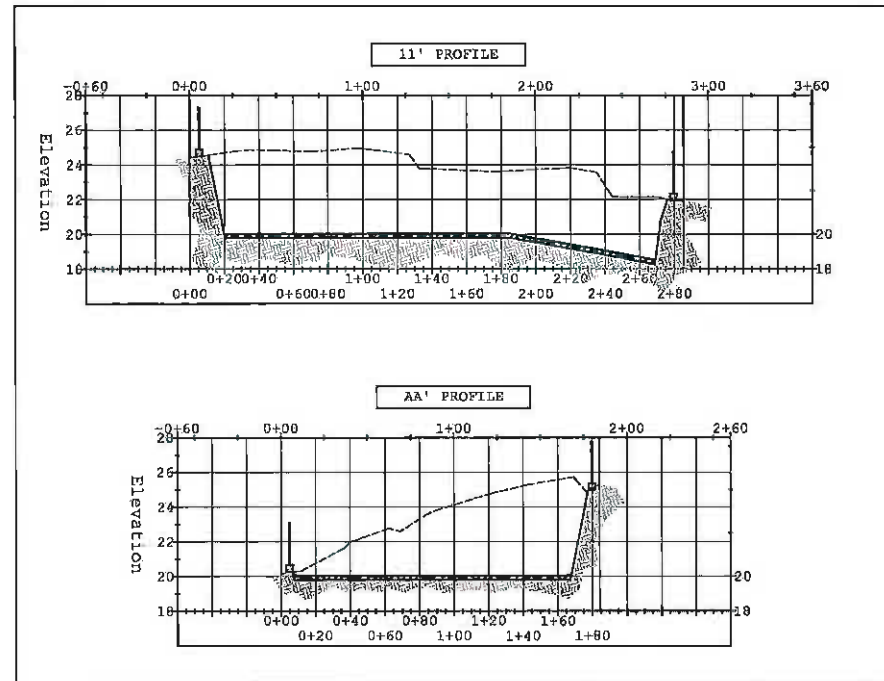
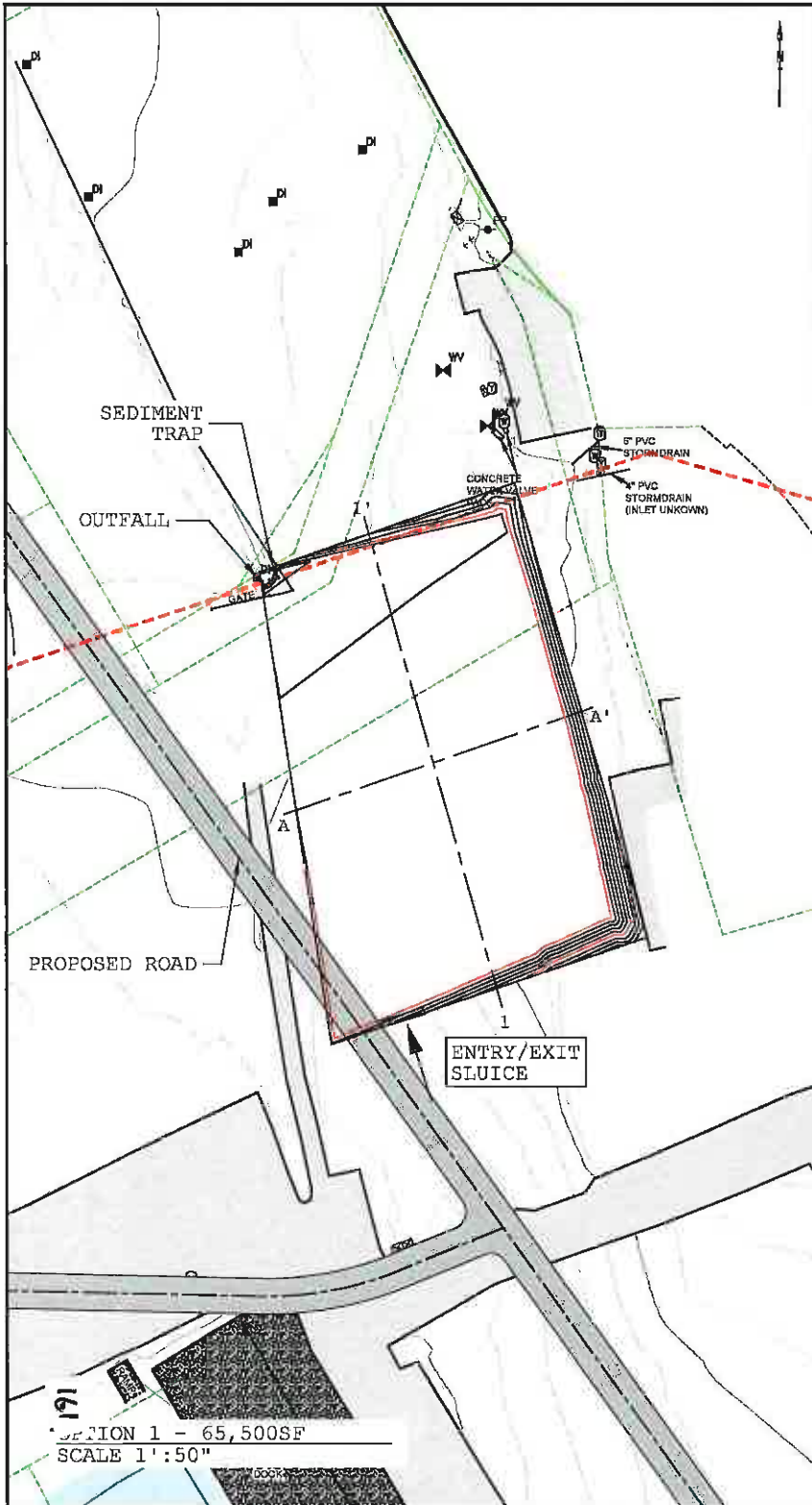
File No.: PB114



# NEW SEDIMENT STORAGE AREA

## LEGEND

-  6" AGGREGATE BASE
-  3/4"-0" CRUSHED ROCK
-  8" AGGREGATE SUBBASE
-  4"-0" CRUSHED ROCK
-  WOVEN GEOTEXTILE FABRIC ACF200
-  PROOF ROLLED SUBGRADE
-  ENGINEERED FILL

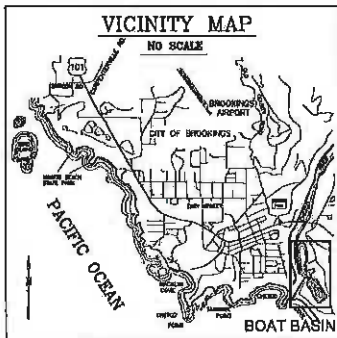


SEDIMENT STORAGE GRADING  
NTS

SECTION 1 - 65,500SF  
SCALE 1":50"

ENGINEER: **EMC**  
 ENGINEERS & ARCHITECTS, LLC  
 16330 Lower Harbor Rd., Brookings, OR 97415  
 PREPARED FOR: (LOT 2800, MAP 34632205)  
**PORT OF BROOKINGS**  
 16330 Lower Harbor Rd., Brookings, OR 97415  
 Date: 04/04/2021  
 Drawn By: INFRADRAFT  
 Sheet No.: C103  
 File No.: PB114





PORT  
OF  
BROOKINGS  
HARBOR



PORT OF BROOKINGS-HARBOR  
2021 CIVIL IMPROVEMENTS

PROPOSED ROAD

NATURAL FEATURES

EXISTING NATURAL RESOURCES OR NATURAL HAZARDS ON THE SUBJECT PROPERTY, INCLUDING WETLANDS, STREAMS, RIPARIAN AREAS, FLOOD PLAINS, OR FLOODWAYS TO BE DETERMINED BY ENGINEER

EXISTING TREE CANOPY

THERE ARE NO EXISTING TREES ON THE SUBJECT PROPERTY

CULTURAL RESOURCES

LOCALLY, OR FEDERALLY DESIGNATED HISTORIC AND/OR CULTURAL RESOURCES ON THE SITE OR ON ADJACENT PARCELS TO BE DETERMINED BY ENGINEER.

PUBLIC SERVICES

PUBLIC UTILITY SERVICES, INCLUDING WATER, SEWER, STORM DRAINAGE, POWER, TELEPHONE, CABLE INTERNET, AND GAS ARE AVAILABLE TO THE SUBJECT PROPERTY.

UTILITY STATEMENT

EXISTING UNDERGROUND UTILITIES ILLUSTRATED IN THESE PLANS ARE APPROXIMATED BASED ON MAPS OBTAINED FROM CURRY COUNTY GIS ELEVATIONS ESTIMATES, OR HAVE BEEN LOCATED BY A UTILITY LOCATE COMPANY. LAYOUT INDICATED IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. ALL LINES WITHIN PROJECTED WORK ZONE SHALL BE FIELD VERIFIED AS REQUIRED PRIOR TO CONSTRUCTION.

PROJECT DESCRIPTION

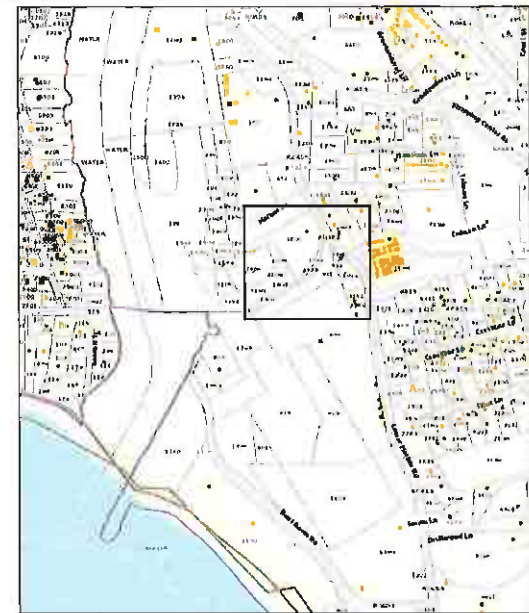
TITLE: PROPOSED ROAD  
REFERENCE: 140  
LOCATION: HARBOR ST  
TAX LOT(S): 2500, 2600, 2700, 2800  
2900, 2999, 402

DRAWING REGISTER

140-CV	COVER SHEET
140-C100	NOTES
140-C101	EXISTING CONDITIONS
140-C102	PROPOSED GRADING
140-C103	PROPOSED PAVING
140-C104	PROPOSED DRAINAGE
140-C105	DETAILS
140-C106	DETAILS



PROJECT OVERVIEW  
SCALE 1" : 200'



PORT OF BROOKINGS HARBOR  
MAP OF TAX LOTS

PRELIM GRADING NOTES

1. DEQ 1200-C PERMIT IS REQUIRED.
2. UNLESS DIRECTED OTHERWISE, REMOVE CLEARED AND GRUBBED MATERIAL FROM THE SITE AND DISPOSE AT AN APPROVED LOCATION.
3. PRIOR TO THE START OF CONSTRUCTION, VERIFY GRADES AT SAWCUT LOCATIONS AND MATCHING OF EXISTING GRADE LOCATIONS.
4. MINIMIZE TRAFFIC ON SOIL AREAS DURING WET WEATHER. IF THE SITE SOILS ARE EXPOSED DURING WET WEATHER, THE USE OF CRUSHED ROCK PLACED AS ENGINEERED FILL IN THE BOTTOM OF THE EXCAVATIONS MAY BE NECESSARY TO PROTECT THE SUBGRADE. TAKE ALL PRECAUTIONS TO LIMIT SURFACE DISTURBANCE AND PROTECT THE SITE GRADING AREA FROM EROSION AND RUNOFF.
5. UNLESS OTHERWISE NOTED, THE SAMPLING AND TESTING OF MATERIALS FOR USE ON THE JOBSITE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. ALL TESTING OF MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY A CERTIFIED TESTER. RESULTS OF THE TESTS SHALL BE SENT DIRECTLY TO THE PROJECT ENGINEER AS WELL AS THE CONTRACTOR, BY THE LABORATORY. LOCATION AND FREQUENCY OF TESTS SHALL BE DESIGNATED BY THE GENERAL CONTRACTOR.
6. ALL CUT AND FILL SLOPES SHALL BE MAXIMUM OF 2:1.

LEGEND	
5	ELEVATION
---	SUBGRADE MINOR CONTOUR
---	SUBGRADE MAJOR CONTOUR
---	PARCEL
---	GEOTEXTILE
■	CONCRETE PAD
■	GRASS
■	JETTY
■	SLIP WAY
■	PAVED ROAD



ENGINEER:



16220 Lower Harbor Rd., Brookings, OR 97415  
 541.338.2299  
 www.emc-engineers.com

PREPARED FOR: (LOT 2800, MAP 36032299)

PORT OF BROOKINGS  
16220 Lower Harbor Rd., Brookings, OR 97415

Date 04/04/2021  
 Drawn By INFRADRAFT  
 Sheet No. CV  
 File No. 140

**GRADING NOTES**

1. PRIOR TO THE CONSTRUCTION OF EMBANKMENTS, THE CONTRACTOR SHALL EXCAVATE UNSUITABLE FOUNDATION MATERIAL. BASEMENTS, TRENCHES AND HOLES ENCOUNTERED WITHIN EMBANKMENT LIMITS SHALL BE FILLED WITH APPROVED MATERIAL. PRIOR TO BACKFILLING THE CONTRACTOR SHALL BREAK CONCRETE FLOORS OF BASEMENTS AS DIRECTED. THE CONTRACTOR SHALL BREAK UP AND ROUGHEN THE GROUND SURFACE BEFORE EMBANKMENTS MATERIAL IS PLACED THE NATURAL GROUND UNDERLYING EMBANKMENTS SHALL BE COMPACTED TO THE DENSITY SPECIFIED FOR THE EMBANKMENT MATERIALS TO BE PLACED, AND TO THE DEPTH OF THE GRUBBING OR A MINIMUM OF 6 INCHES.
2. EMBANKMENT CONSTRUCTION SHALL INCLUDE PREPARATION OF THE AREAS UPON WHICH EMBANKMENTS ARE PLACED, THE PLACEMENT AND COMPACTION OF APPROVED EMBANKMENT MATERIALS AND FILLING OF HOLES, PITS AND OTHER DEPRESSIONS WITHIN THE SUBDIVISION.
3. THE CONTRACTOR SHALL PLACE EMBANKMENTS AND FILLS IN THE HORIZONTAL LAYERS OF 8 INCHES MAXIMUM DEPTH AND COMPACT EACH LAYER TO THE DENSITY SPECIFIED.
4. EMBANKMENT SHALL NOT BE CONSTRUCTED WHEN THE EMBANKMENT MATERIAL OR THE FOUNDATION ON WHICH THE EMBANKMENT WOULD BE PLACED IS FROZEN.
5. IMMEDIATELY PRIOR TO COMPLETION OF THE EARTHWORK, THE CONTRACTOR SHALL CLEAN THE ENTIRE WORK AREA OF DEBRIS AND FOREIGN MATTER.
6. THE MAXIMUM DENSITY OF COMPACTED MATERIAL WILL BE DETERMINED BY AASHTO T-99
7. THE CONTRACTOR SHALL COMPACT ALL EMBANKMENTS, FILLS AND BACKFILLS TO A MINIMUM IN PLACE DENSITY OF 95 PERCENT.
8. THE CONTRACTOR SHALL WATER THE MATERIALS TO PROVIDE OPTIMUM MOISTURE FOR COMPACTION OF EMBANKMENT AND BACKFILLS. EMBANKMENTS OD BACKFILL MATERIALS SHALL NOT BE PLACED IN FINAL POSITION UNTIL MOISTURE IN EXCESS OF OPTIMUM MOISTURE HAS BEEN REMOVED.
9. IF THE SPECIFIED COMPACTION IS NOT OBTAINED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER. THE CONTRACTOR MAY BE REQUIRED TO USE A MODIFIED COMPACTION PROCEDURE OR APPLY ADDITIONAL COMPACTIVE EFFORT. IF APPROVED MATERIALS MEETING THE SPECIFICATIONS CANNOT BE COMPACTED TO THE REQUIRED DENSITY REGARDLESS OF COMPACTIVE EFFORT OR METHOD, THE ENGINEER MAY REDUCE THE REQUIRED DENSITY OR DIRECT THE ALTERNATE MATERIALS BE USED. IN NO CASE SHALL EARTHWORK OPERATIONS PROCEED UNTIL THE CONTRACTOR IS ABLE TO COMPACT THE MATERIAL TO THE SATISFACTION OF THE ENGINEER.
10. DEQ 1200-C PERMIT IS NOT REQUIRED.
11. UNLESS DIRECTED OTHERWISE, REMOVE CLEARED AND GRUBBED MATERIAL FROM THE SITE AND DISPOSE AT AN APPROVED LOCATION.
12. UNLESS OTHERWISE NOTED, THE SAMPLING AND TESTING OF MATERIALS FOR USE ON THE JOBSITE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. ALL TESTING OF MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY A CERTIFIED TESTER. RESULTS OF THE TESTS SHALL BE SENT DIRECTLY TO THE PROJECT ENGINEER AS WELL AS THE CONTRACTOR, BY THE LABORATORY. LOCATION AND FREQUENCY OF TESTS SHALL BE DESIGNATED BY THE GENERAL CONTRACTOR.
13. ALL CUT AND FILL SLOPES SHALL BE MAXIMUM OF 2:1.

**GEOTECHNICAL NOTE**

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE PROJECT ENGINEER FOR REQUIRED REMEDIATION. THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT ENGINEER FOR REQUIRED SITE OBSERVATIONS AND TESTING OF ALL FILLS.

GENERAL NOTES  
NO SCALE



NO.	DATE	REVISION



PORT OF BROOKINGS  
HARBOR

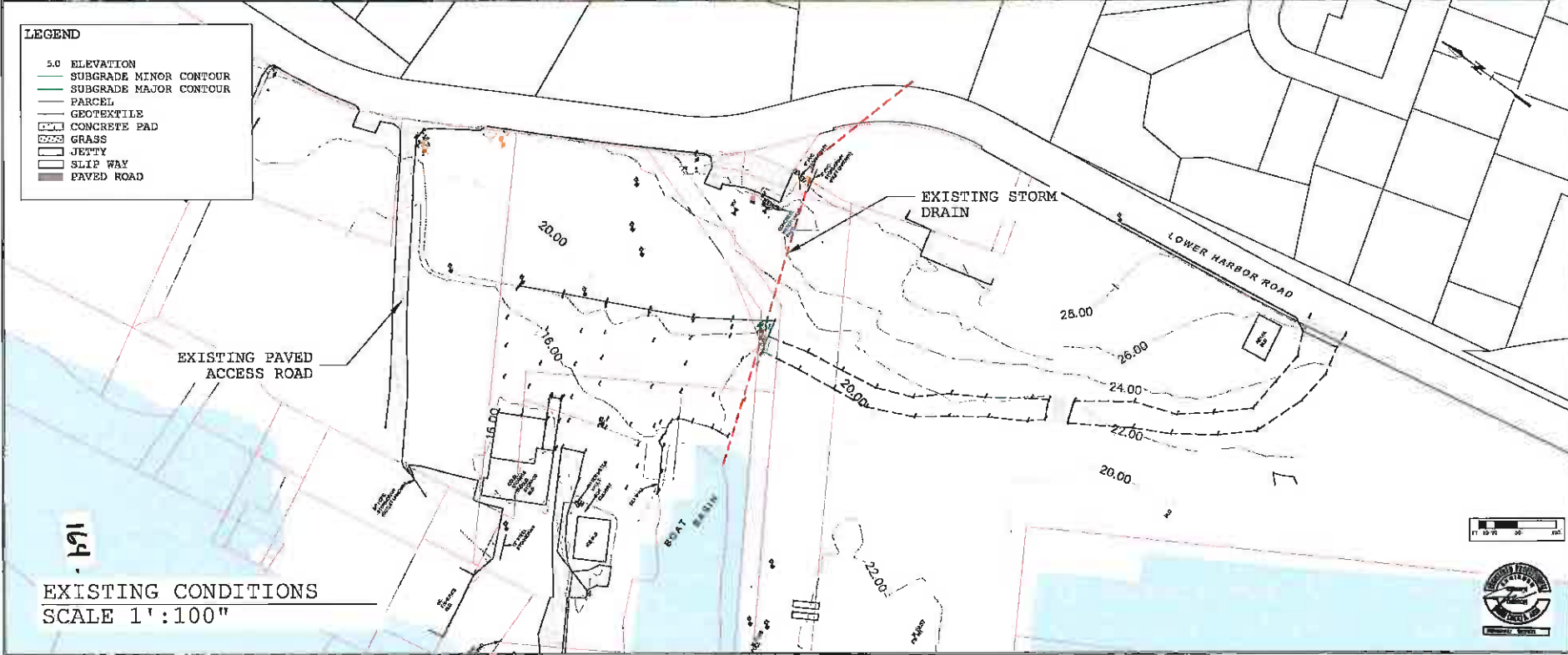
PREPARED FOR: (LOT 2800, MAP '860320B')  
**PORT OF BROOKINGS**  
16390 Lower Harbor Rd, Brookings, OR 97415

Date 04/04/2021  
Drawn By INFRADRAFT  
Sheet No. C-100  
File No.





- LEGEND**
- 5.0 ELEVATION
  - SUBGRADE MINOR CONTOUR
  - SUBGRADE MAJOR CONTOUR
  - PARCEL
  - GEOTEXTILE
  - CONCRETE PAD
  - GRASS
  - JETTY
  - SLIP WAY
  - PAVED ROAD



EXISTING CONDITIONS  
SCALE 1":100"

ENGINEER:  
**EMC**  
Engineering & Construction, LLC

NO.	DATE	REVISION

POINT OF BROOKINGS  
LANDMARK

PREPARED FOR: (LOT 2600, MAP '90052208')  
**PORT OF BROOKINGS**  
1630 Lower Harbor Rd, Brookings, OR 97415

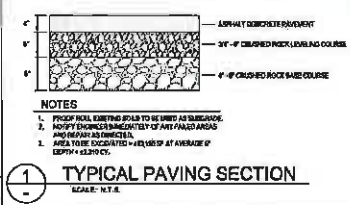
Date: 04/04/2021  
Drawn By: INFRADRAFT  
Sheet No.: C-101  
File No.: 140



- LEGEND**
- 5.0 ELEVATION
  - SUBGRADE MINOR CONTOUR
  - SUBGRADE MAJOR CONTOUR
  - FARCEL
  - GEOTEXTILE
  - CONCRETE PAD
  - GRASS
  - JETTY
  - SLIP WAY
  - PAVED ROAD

EXCAVATE SUBGRADE TO  
±1.5' BELOW TOP OF CONC  
AND TOP OF BANK ELEVATION

PROPOSED SEDIMENT  
STOCKPILE AREA  
(GRADED, UNPAVED)



EXCAVATE SUBGRADE TO  
1.5' BELOW EXISTING ROAD

EXISTING PAVED  
ACCESS ROAD

OPERATIONS  
AREA

EXCAVATE SUBGRADE TO  
±1.5' BELOW TOP OF CONC  
AND TOP OF BANK ELEVATION

GRADING PLAN  
SCALE 1':100"

**EARTHWORK REPORT**

Name	Type	Cut Factor	Fill Factor	Adj Area (Sq. Ft.)	Cut (Cu. Yds)	Fill (Cu. Yds)	Net (Cu. Yds)
WOPACH	Gr	1.000	1.000	37112.69	1229.43	0.00	1229.43



PREPARED FOR:  
**PORT OF BROOKINGS**  
16990 Lower Harbor Rd., Brookings, OR 97415

Date  
04/04/2021

Drawn By  
INFRA DRAFT

Sheet No.  
C-102

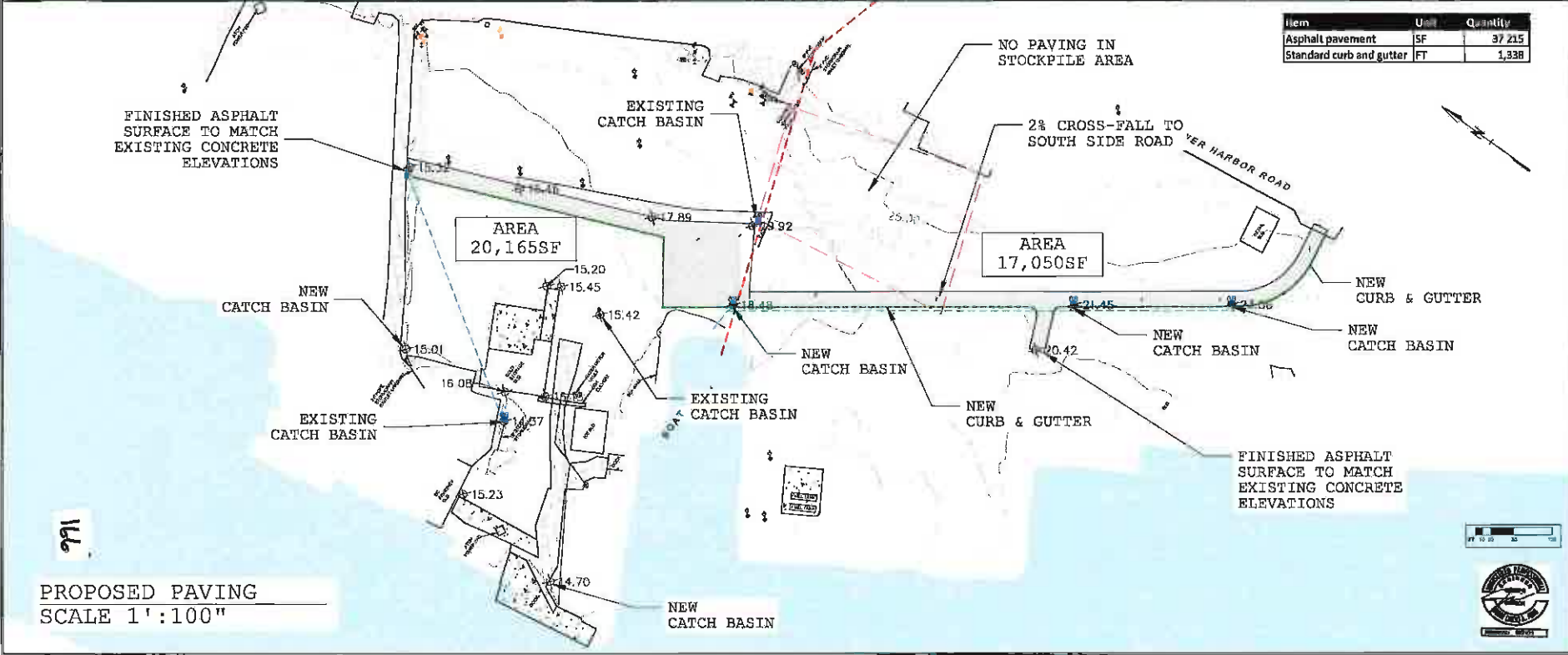
File No.  
140



NO.	DATE	REVISION



NO.	DATE	REVISION	BY



Item	Unit	Quantity
Asphalt pavement	SF	37,215
Standard curb and gutter	FT	1,338



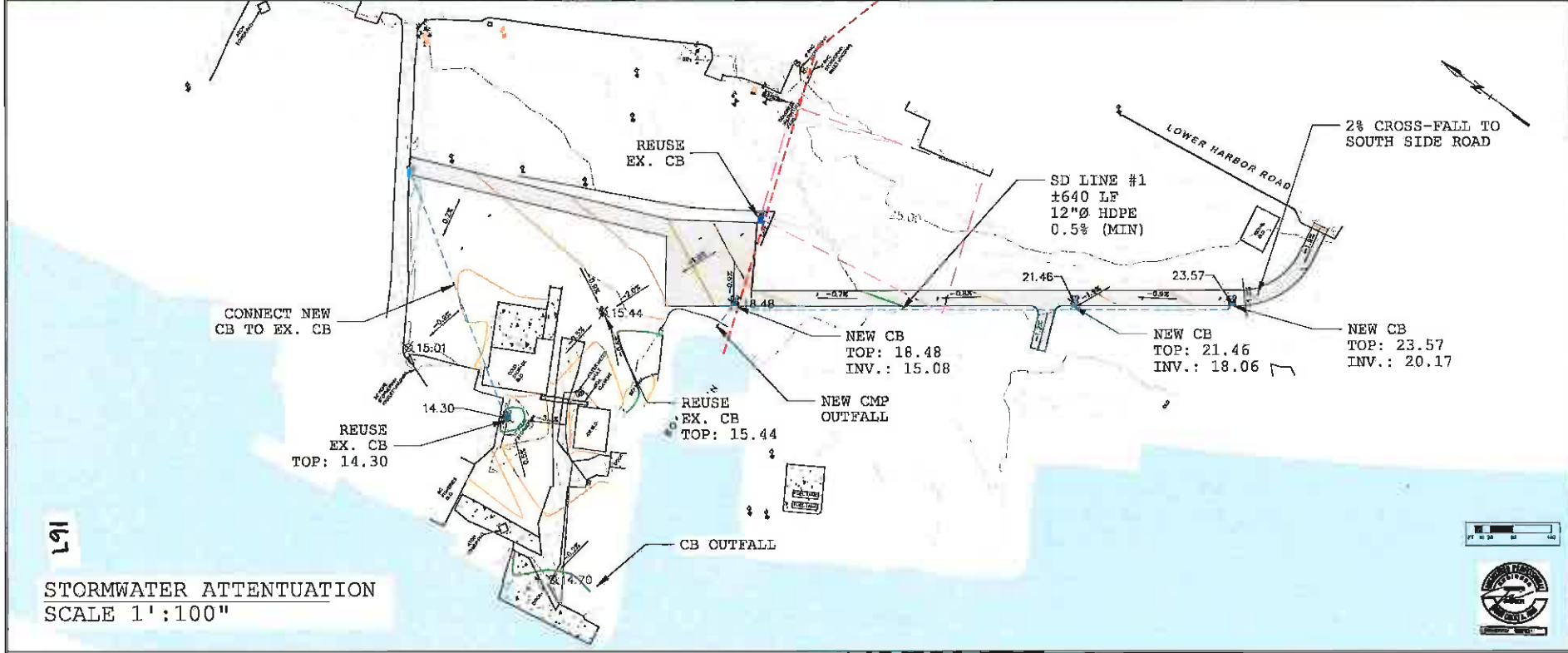
PREPARED FOR: (LOT 2900, MAP 36052205)  
**PORT OF BROOKINGS**  
 18930 Lower Harbor Rd, Brookings, OR 97415

Date: 04/04/2021  
 Drawn By: INFRA DRAFT  
 Sheet No: C-103  
 File No. 140

PROPOSED PAVING  
 SCALE 1":100"



991



191

STORMWATER ATTENUATION  
SCALE 1':100"



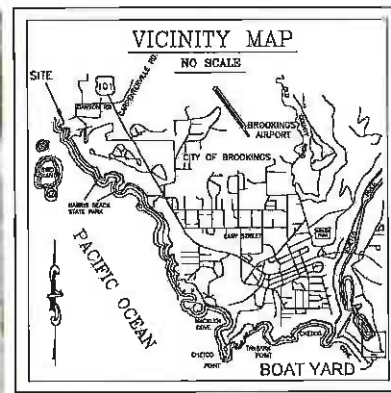
ENGINEER:

EMC  
Engineering & Construction  
16330 Lower Harbor Rd., Brookings, OR 97415  
Phone: 541.338.2200  
Fax: 541.338.2201  
www.emc-engineers.com

NO.	DATE	REVISION

PREPARED FOR:  
**PORT OF BROOKINGS**  
(LOT 2900, MAP 38052208)  
16330 Lower Harbor Rd., Brookings, OR 97415

Date: 04/04/2021  
 Drawn By: INFRADRAFT  
 Sheet No.: C-104  
 File No.: 140



**GRADING NOTES**

1. PRIOR TO THE CONSTRUCTION OF EMBANKMENTS, THE CONTRACTOR SHALL EXCAVATE UNSUITABLE FOUNDATION MATERIAL, BASEMENTS, TRENCHES AND HOLES ENCOUNTERED WITHIN EMBANKMENT TRENCHES SHALL BE FILLED WITH APPROVED MATERIAL. PRIOR TO BACKFILLING THE CONTRACTOR SHALL BREAKUP AND REWORK THE GROUND SURFACE. BEFORE EMBANKMENTS MATERIAL IS PLACED THE NATURAL GROUND UNDERLYING EMBANKMENTS SHALL BE COMPACTED TO THE DENSITY SPECIFIED IN THE EMBANKMENT MATERIALS TO BE PLACED, AND TO THE DEPTH OF THE COMING GRADE MINIMUM OF 6 INCHES.
2. EMBANKMENT CONSTRUCTION SHALL INCLUDE PREPARATION OF THE AREAS UPON WHICH EMBANKMENTS ARE PLACED, THE PLACEMENT AND COMPACTING OF APPROVED EMBANKMENT MATERIALS AND FILLING OF HOLES, PITS AND OTHER DEPRESSIONS WITHIN THE SUBGRADE.
3. THE CONTRACTOR SHALL PLACE EMBANKMENTS AND FILL IN THE HORIZONTAL LAYERS OF 8 INCHES MAXIMUM THICK AND CONTACT EACH LAYER TO THE DENSITY SPECIFIED.
4. EMBANKMENTS SHALL NOT BE CONSTRUCTED WHEN THE EMBANKMENT MATERIAL OR THE FOUNDATION ON WHICH THE EMBANKMENT WOULD BE PLACED IS FROZEN.
5. IMMEDIATELY PRIOR TO COMPLETION OF THE EMBANKMENT, THE CONTRACTOR SHALL CLEAN THE ENTIRE WORK AREA OF DEBRIS AND FOREIGN MATERIAL.
6. THE MAXIMUM DENSITY OF COMPACTED MATERIAL SHALL BE DETERMINED BY ASTM D 1557.
7. THE CONTRACTOR SHALL COMPACT ALL EMBANKMENTS, FILLS AND BACKFILLS TO A MINIMUM IN PLACE DENSITY OF 98 PERCENT.
8. THE CONTRACTOR SHALL WATER THE MATERIALS TO PROVIDE OPTIMAL MOISTURE FOR COMPACTION OF EMBANKMENT AND BACKFILLS. EMBANKMENTS OR BACKFILL MATERIALS SHALL NOT BE PLACED IN FINAL POSITION UNTIL MOISTURE IN EXCESS OF OPTIMUM MOISTURE HAS BEEN REMOVED.
9. IF THE SPECIFIED COMPACTION IS NOT OBTAINED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER, THE CONTRACTOR MAY BE REQUIRED TO USE A LIQUID & COMPACTOR PROCEDURE OR APPLY ADDITIONAL COMPACTION EFFORT. IF APPROVED MATERIAL MEETING THE SPECIFICATIONS CANNOT BE OBTAINED TO THE REQUIRED DENSITY REGARDLESS OF COMPACTION EFFORT OR METHOD, THE ENGINEER MAY REQUIRE THE REQUIRED DENSITY OR DIRECT THE ALTERNATE MATERIALS BE USED. IN NO CASE SHALL EMBANKMENT OPERATIONS PROCEED UNTIL THE CONTRACTOR IS ABLE TO COMPACT THE MATERIAL TO THE SATISFACTION OF THE ENGINEER.
10. SEE SPECIFICATIONS FOR REQUIREMENTS.
11. UNLESS DIRECTED OTHERWISE, PRISMATIC GRAVEL AND GRADED.
12. MATERIAL FROM THE SITE AND DISPOSAL AT AN APPROVED LOCAL TYPH UNLESS OTHERWISE NOTED, THE SAMPLES AND TESTS OF MATERIALS FOR USE ON THE JOB SITE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. ALL TESTS OF MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY A QUALIFIED TESTING AGENCY. THE RESULTS OF THE TESTS SHALL BE SENT DIRECTLY TO THE PROJECT ENGINEER AS WELL AS THE CONTRACTOR, BY THE LABORATORY. LOCATION AND FREQUENCY OF TESTS SHALL BE DETERMINED BY THE GENERAL CONTRACTOR.
13. ALL CUT AND FILL SLOPES SHALL BE MAXIMUM OF 2:1.

**GEOTECHNICAL NOTE**

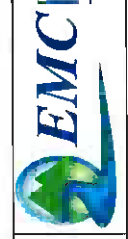
THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE PROJECT ENGINEER FOR REQUIRED REMEDIATION. THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT ENGINEER FOR REQUIRED GROUND OBSERVATIONS AND TESTING OF ALL FILLS.

**SHEET INDEX**

- C1.0 COVER SHEET
- C2.0 EXISTING CONDITIONS
- C2.1 GRADING PLAN
- C2.2 FINISHED A/C GRADE
- C3.0 PAVEMENT AREA
- C4.0 STORMWATER CONVEYANCE
- C4.1 STORMWATER CONVEYANCE PROFILE
- C5.0 NOT USED
- C5.0 PROJECT DETAILS
- C5.1 PROJECT DETAILS

REVISIONS	

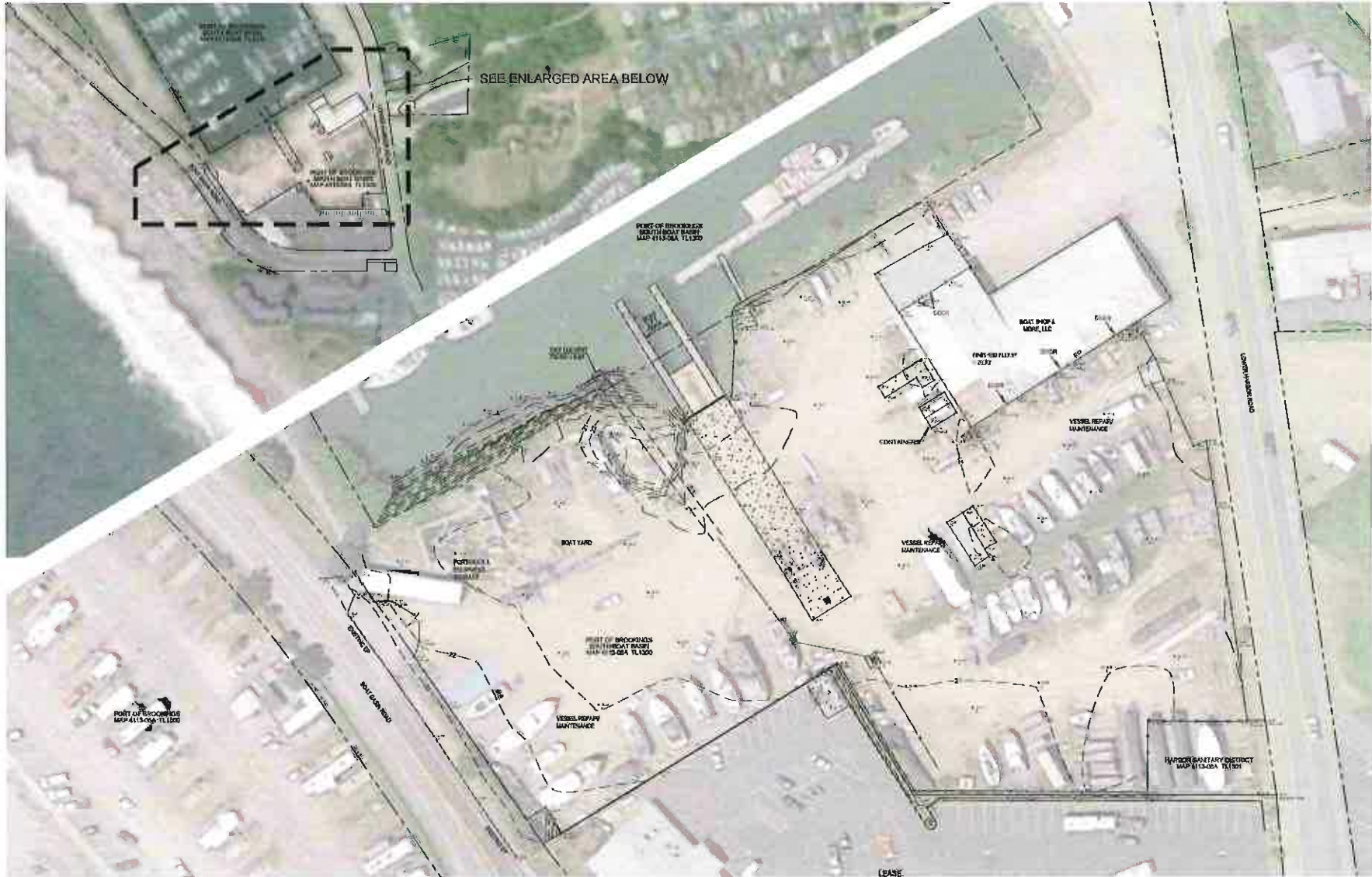
Charles E. Johnson, P.E. - Principal, O.R.  
 16330 Lower Harbor Road, Brookings, OR 97415  
 Phone: 541-338-2121 Fax: 541-338-2122  
<http://www.emc-engineers.com>  
**EMC** - Engineers/Scientists, LLC



**PORT OF BROOKINGS HARBOR**  
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
**BOAT YARD PAVING**

DRAWN BY: JG  
 DATE: 11 MAY 2021  
 JOB No: 16330  
 SHEET No: **C1.0**  
**C1.0**  
 COVER SHEET

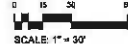




SURVEY BY  
ROBERTS ASSOCIATES & LAND SURVEYS, INC.  
611 SPURCE STREET  
BROOKINGS, OR 97415  
(541) 469-0182

**HORIZONTAL DATUM**  
DENSEM COORDINATE REFERENCE SYSTEM (DENSEM COGS87)  
ZONES AS DESIGNATED BY GROUND STATIONS FOR THE FILE # JS  
70-0050000 TYP# 73-0050015. COORDINATES WERE  
COMPUTED TO THE CIRCUMFERENTIAL (CPS) REFERENCE  
NETWORK ENGINEERING TO HAD 808111 BPOCK 2103.  
INTERNATIONAL FEET, WITH A RELATIVE ACCURACY OF 42%.

**VERTICAL DATUM**  
MEAN LOWER LOW WATER EPOCH 1983-2001  
BENCHMARK UTILIZED FOR THIS SURVEY  
US ARMY CORPS OF ENGINEERS  
BENCHMARK - "TIDE" 2"  
ELEVATION - 31.65 FEET



**EXISTING CONDITIONS**  
SCALE: 1" = 30' (PLAN)

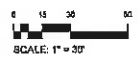
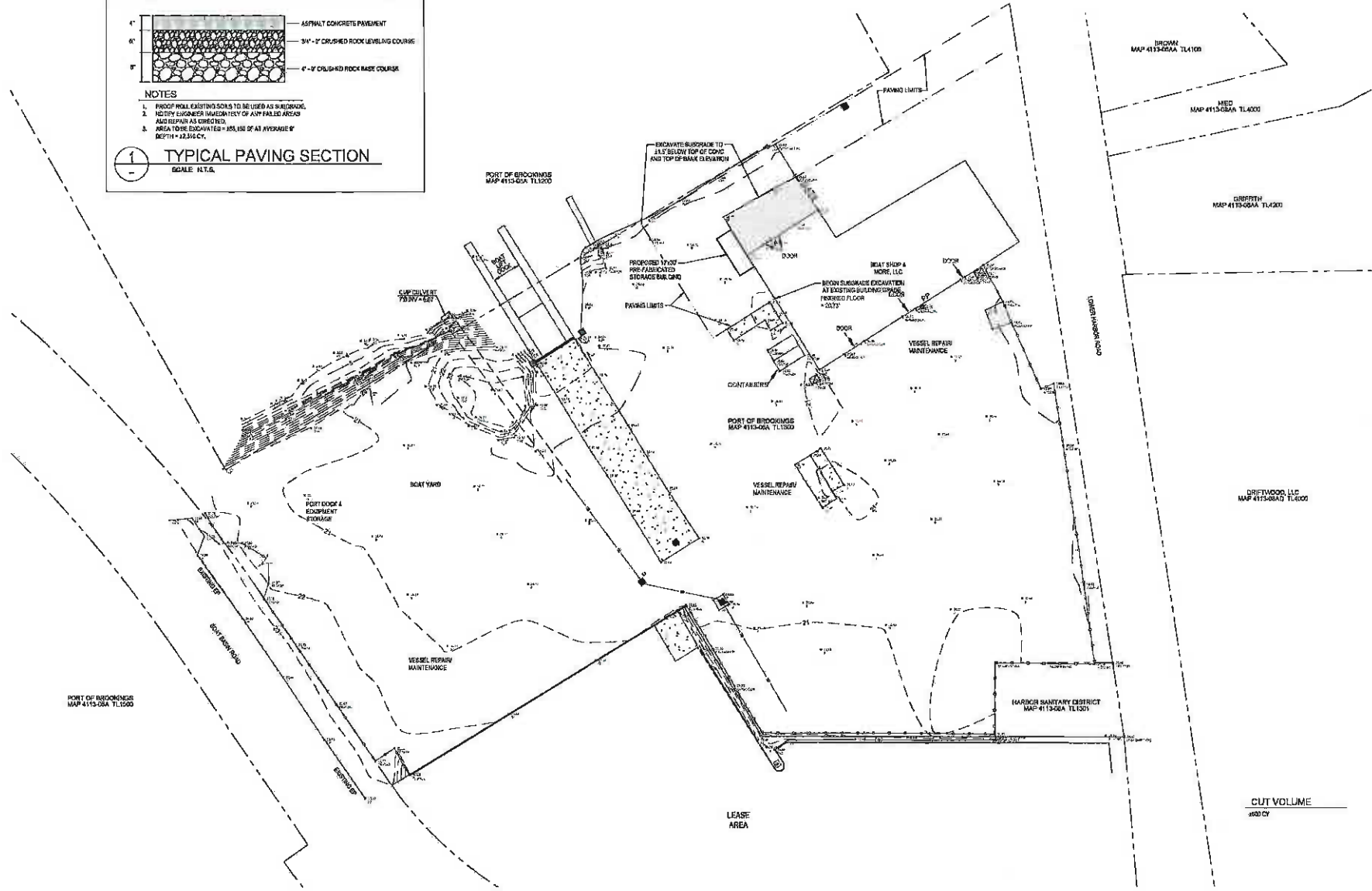
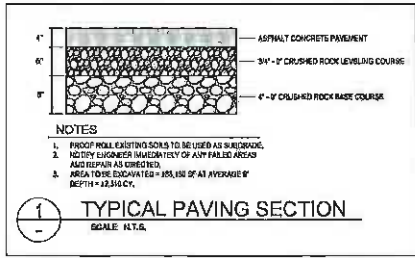


REVISIONS	BY

Carroll Park • Jacksonville • Memphis • OK  
COLUMBIA ENGINEERS & ARCHITECTS, INC.  
1600 W. WASHINGTON ST., SUITE 110  
MEMPHIS, TN 38103  
MEMPHIS: (901) 527-1234  
JACKSONVILLE: (904) 243-1234  
JACKSONVILLE: (904) 243-1234  
COLUMBIA: (803) 445-1234  
[www.columbiaengineers.com](http://www.columbiaengineers.com)  
Engineers/Architects, LLC

**PORT OF BROOKINGS HARBOR**  
10330 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
**BOAT YARD PAVING**

DRAWN BY: JES  
DATE: 11 MAY 2021  
JOB No:   
SHEET No:   
**C2.0**  
EXISTING  
CONDITIONS

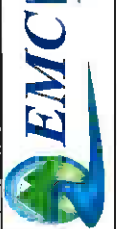


**GRADING PLAN**  
SCALE: 1" = 30' (24:36)



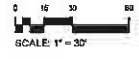
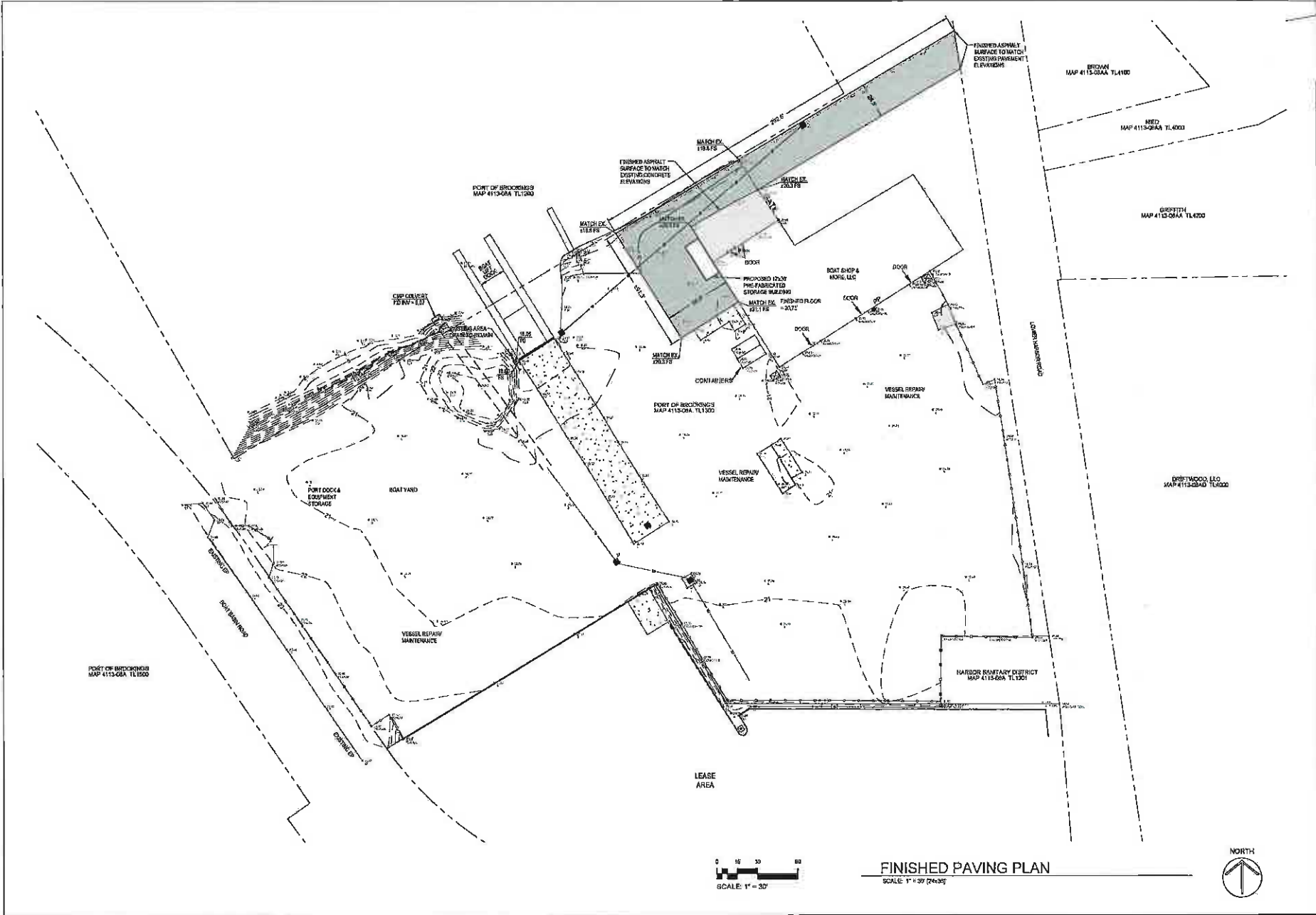
REVISIONS	DATE	BY	DESCRIPTION

General Plans, Specifications, & Materials, OR  
 ALL OTHERS. 1400 Lower Harbor Road, Brookings, SD 57003  
 605.733.2222  
[www.emcinc.com](http://www.emcinc.com)  
**EMC**  
 Engineers & Scientists, LLC



**PORT OF BROOKINGS HARBOR**  
 16330 LOWER HARBOR ROAD, BROOKINGS, SD 57016  
**BOAT YARD PAVING**

DRAWN BY: JG  
 DATE: 11 MAY 2021  
 JOB No.:  
 SHEET No.:  
**C2.1**  
 GRADING PLAN



**FINISHED PAVING PLAN**  
SCALE: 1" = 30'



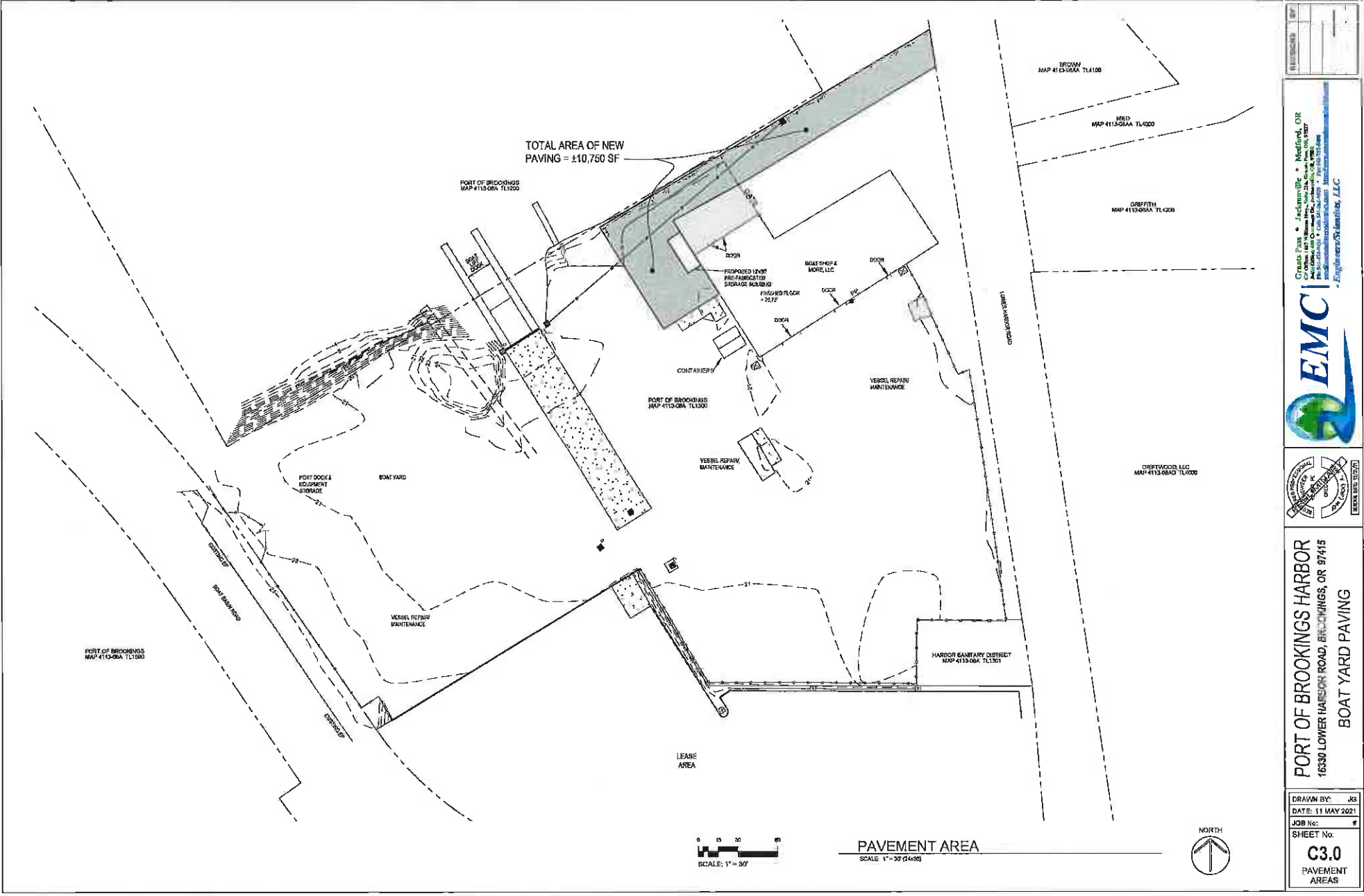
REV	DESCRIPTION

Grades Plus • Jankins & Co. • Madras, OR  
 503-775-2200 • www.gradesplus.com  
 Engineers & Scientists, LLC  
 503-775-2200 • www.esllc.com



**PORT OF BROOKINGS HARBOR**  
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
**BOAT YARD PAVING**

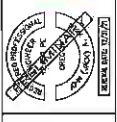
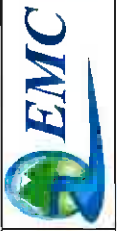
DRAWN BY: JED  
 DATE: 11 MAY 2021  
 JOB No: #  
 SHEET No:  
**C2.2**  
 FINISHED PAVING PLAN



TOTAL AREA OF NEW PAVING = 110,750 SF

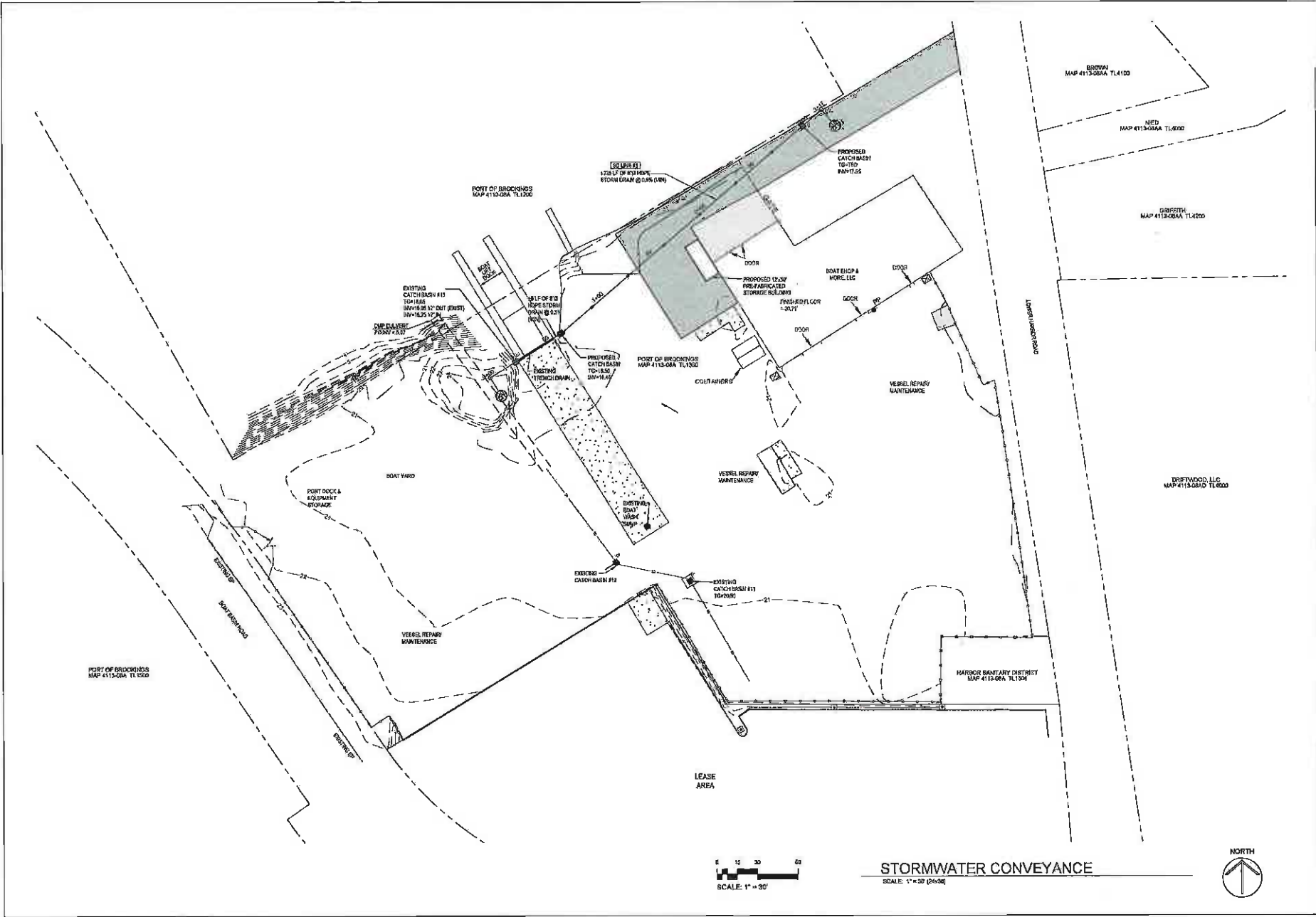
DATE	11 MAY 2021
SCALE	1" = 30'

Create Plans & Specifications • Mechanical, OR  
 Civil, Electrical, and Structural • Surveying, OR  
 Marine • Construction Management • Construction Law, OR  
 Professional Engineer • Professional Surveyor • Professional Architect  
 - Engineers Of America, LLC



**PORT OF BROOKINGS HARBOR**  
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
**BOAT YARD PAVING**

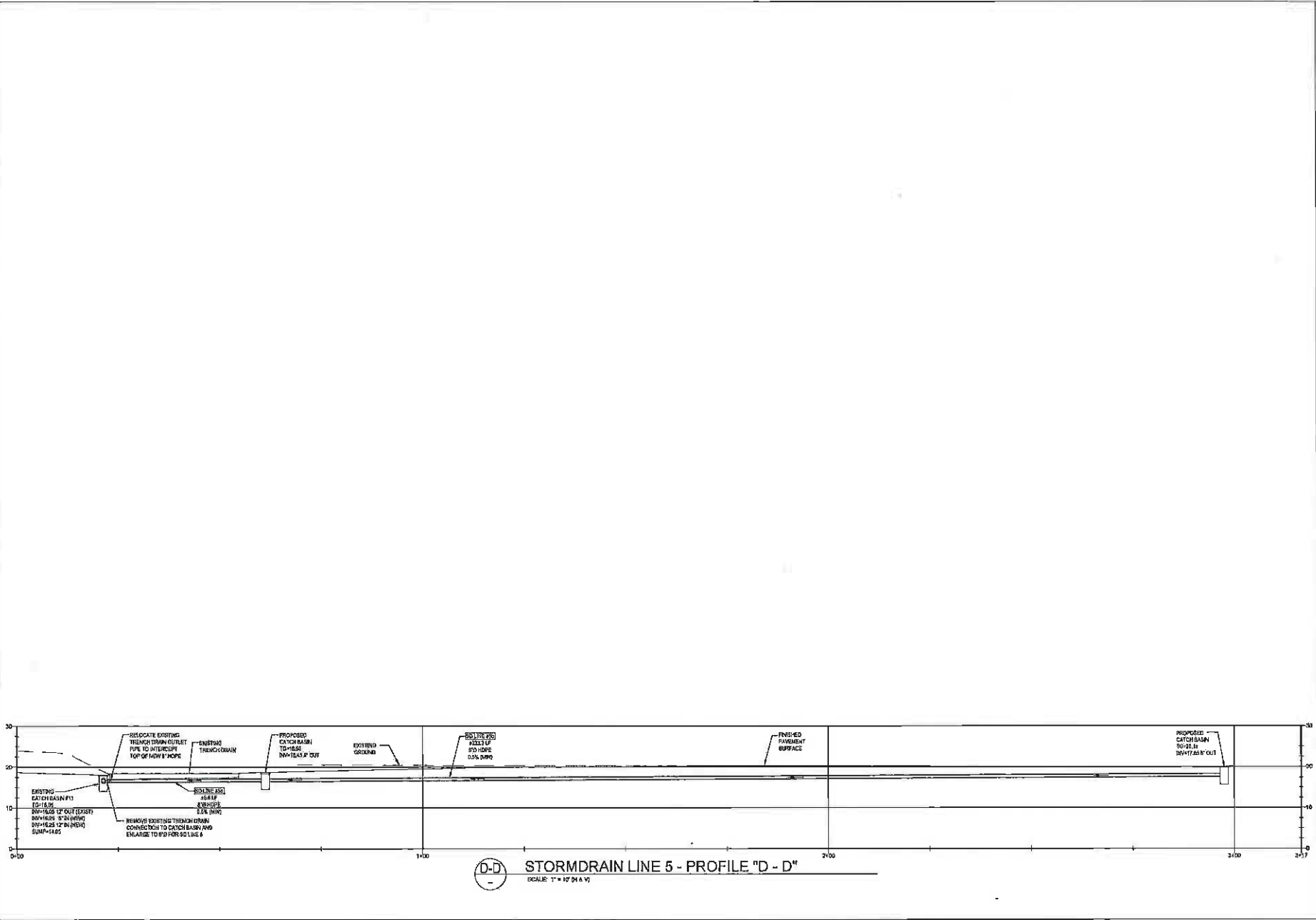
DRAWN BY:	JES
DATE:	11 MAY 2021
JOB No:	
SHEET No:	<b>C3.0</b>
PAVEMENT AREAS	



173

<p><b>EMC</b></p> <p>Environmental Management Company, LLC</p>
<p>GRAND PASS • JACKSONVILLE • MEDFORD, OR</p> <p>1400 S. JACKSONVILLE AVENUE, SUITE 200</p> <p>Medford, OR 97504</p> <p>PH: 541.754.1100</p> <p>WWW.EMCCORPORATION.COM</p>
<p>PROFESSIONAL ENGINEER</p> <p>STATE OF OREGON</p> <p>NO. 12345</p> <p>EXPIRES 12/31/2024</p> <p>EMC, INC. U.S.A.</p>
<p><b>PORT OF BROOKINGS HARBOR</b> 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415</p> <p><b>BOAT YARD PAVING</b></p>
<p>DRAWN BY: JD</p> <p>DATE: 11 MAY 2021</p> <p>JOB No: #</p> <p>SHEET No:</p> <p><b>C4.0</b></p> <p>STORMWATER CONVEYANCE</p>

124



**D-D**  
**STORMDRAIN LINE 5 - PROFILE "D - D"**  
 SCALE: 1" = 10' (H & V)

REVISIONS	BY	DATE

**EMC**  
 ENGINEERS & ARCHITECTS  
 16330 LOWER HARBOUR ROAD, BROOKINGS, OR 97415  
 TEL: 541.325.2222 FAX: 541.325.2223  
 www.emc-engineers.com

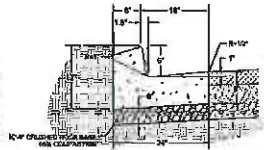


**PORT OF BROOKINGS HARBOR**  
 16330 LOWER HARBOUR ROAD, BROOKINGS, OR 97415  
**BOAT YARD PAVING**

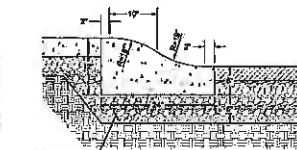
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 DATE: 11 MAY 2021  
 JOB No: #  
 SHEET No:  
**C4.1**  
 STORMDRAIN  
 PROFILES



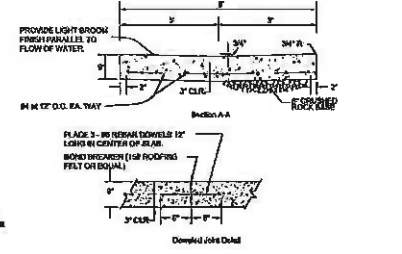
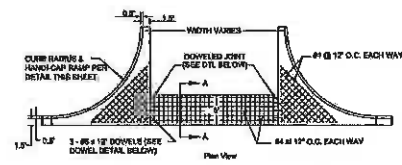
**301 VERTICAL CURB**  
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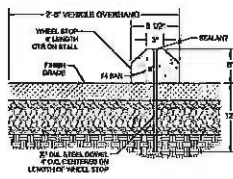
**302 CURB & GUTTER**  
SCALE: NTS



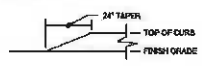
**303 ROLLED CURB**  
SCALE: NTS



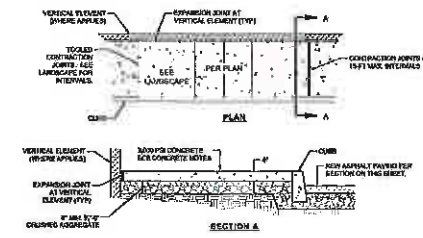
**NOTES**  
1. CONCRETE TO BE COMMERCIAL GRADE CONCRETE (5000) PER 2009 ACI 308R OR ACI 308.1A SECTION 604.00  
2. SUBGRADE AND SAND SHALL BE LAYED AND FINALLY COMPACTED.  
3. VALLEY GUTTER SHALL PASS A WATER TEST TO ASSURE FLOW.



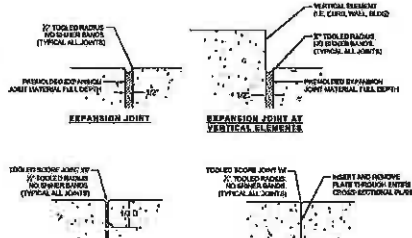
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SCALE: NTS



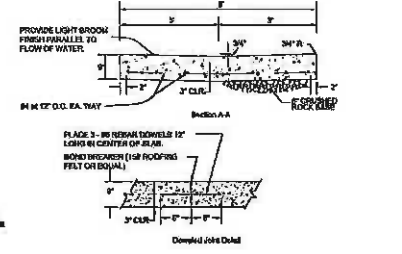
**305 CURB TAPER**  
SCALE: NTS



**311 CURB LINE CONCRETE SIDEWALK**  
SCALE: NTS

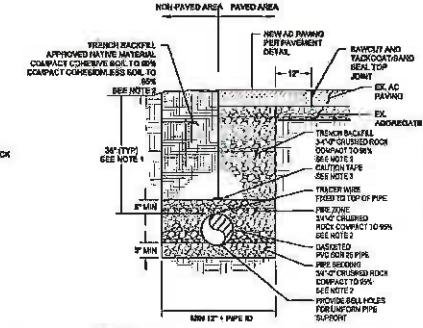


**309 CONCRETE CONTROL JOINTS**  
SCALE: NTS

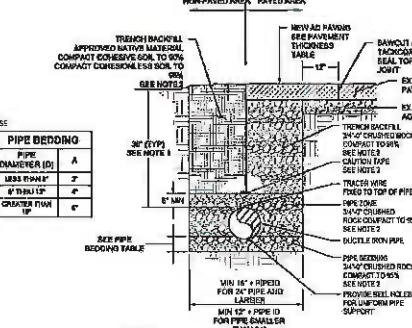


**NOTES**  
1. CONCRETE TO BE COMMERCIAL GRADE CONCRETE (5000) PER 2009 ACI 308R OR ACI 308.1A SECTION 604.00  
2. SUBGRADE AND SAND SHALL BE LAYED AND FINALLY COMPACTED.  
3. VALLEY GUTTER SHALL PASS A WATER TEST TO ASSURE FLOW.

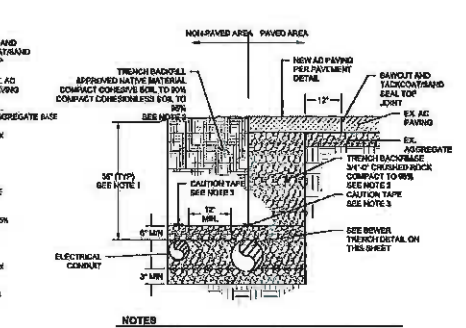
**327 DRIVEWAY APRON WITH VALLEY GUTTER**  
SCALE: NTS



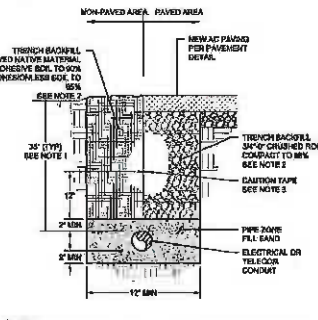
**581 SEWER TRENCH DETAIL**  
SCALE: NTS



**580 WATER TRENCH DETAIL**  
SCALE: NTS



**584 JOINT TRENCH DETAIL**  
SCALE: NTS



**583 CONDUIT TRENCH DETAIL**  
SCALE: NTS

PIPE BEDDING	
PIPE DIAMETER (D)	A
4\"/>	

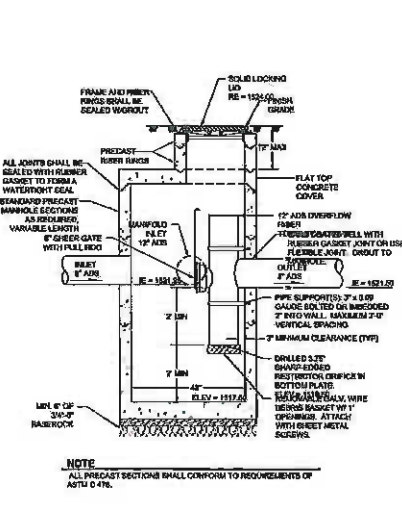
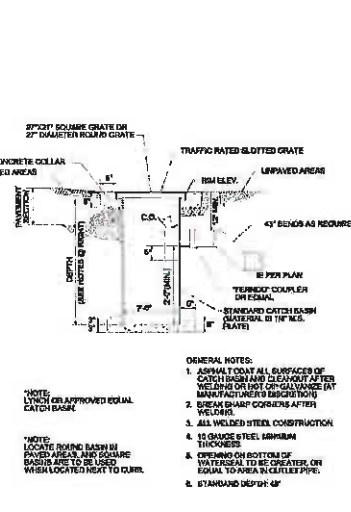
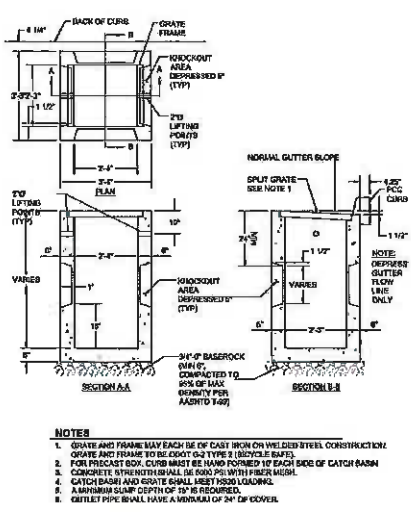
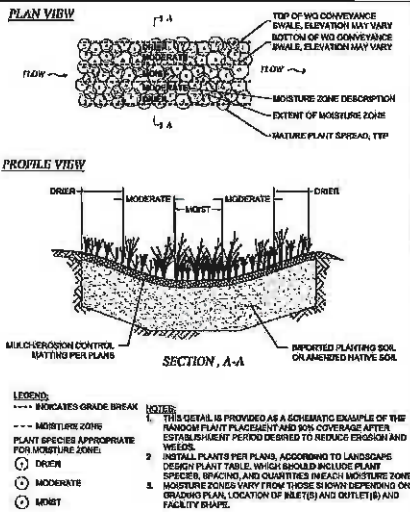
DATE:	11 MAY 2021
DRAWN BY:	JD
CHECKED BY:	
SCALE:	AS SHOWN

**EMC**  
Engineers & Architects, LLC  
Creates Trust • Respects the Planet • Advances the Profession  
16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
503.768.1111  
www.emc-engineers.com



**PORT OF BROOKINGS HARBOR**  
16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
**BOAT YARD PAVING**

DRAWN BY: JD  
DATE: 11 MAY 2021  
JOB No: #  
SHEET No: #  
**C6.0**  
PROJECT DETAILS



Rogue Valley Stormwater Design Manual	Water Quality Conveyance Swale Planting Schematic	BMP 0.03 1 of 1 Scale: NTS
---------------------------------------	---	----------------------------------

**General Notes for Vegetated BMPs**

- Detailed installation of the filter bed, exposed to the bottom of the basin, shall be provided to the contractor (including materials and equipment) as shown.
- Build an 8\"/>

**AMBIENT PLANTING SOIL AND VEGETATION**

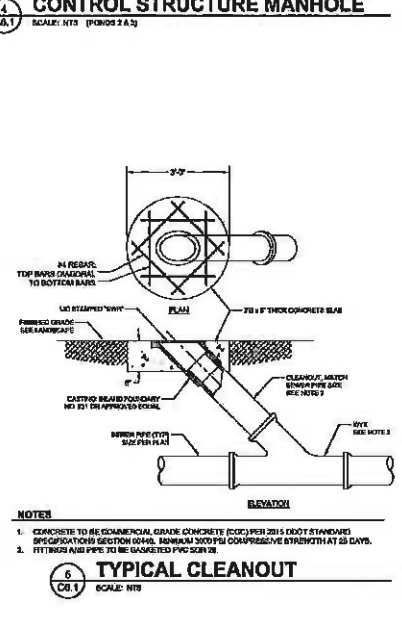
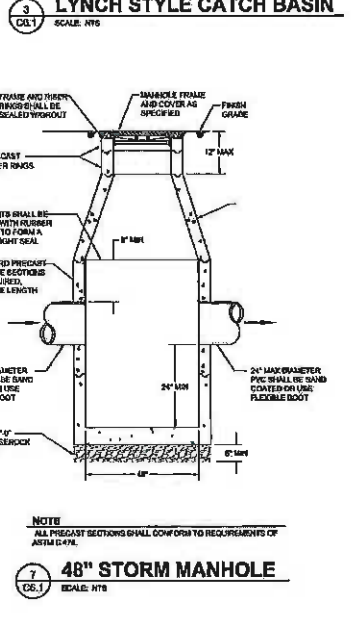
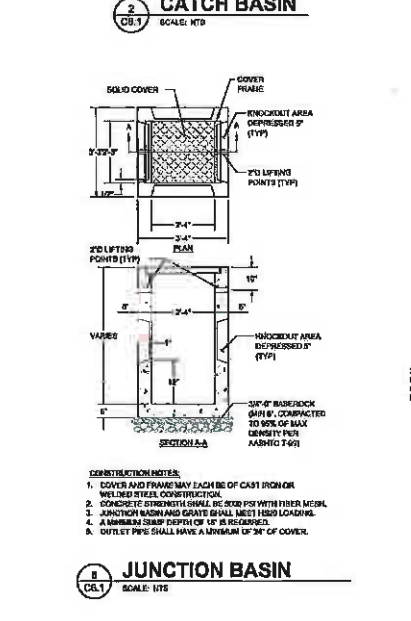
- Soil depth between 2.5 and 18 inches.
- Free of weed seeds, rocks, sticks, and hazardous materials.
- Organic content greater than 17% by weight.
- Carbon nitrogen ratio (C/N) greater than or equal to 15 (leaf litter) or 10 (grass) if dry soil.
- 2-3% clay content.
- pH between 6.5 and 8.0.
- Continue to amend adjusting quantities for soil.

US Standard Core Size	Planting Density
1/4"	1000
3/8"	600
1/2"	400
3/4"	250
1"	150
1 1/2"	100
2"	75
3"	50
4"	35
6"	20
8"	15
10"	10
12"	7
15"	5
18"	3

**CONSTRUCTION NOTES:**

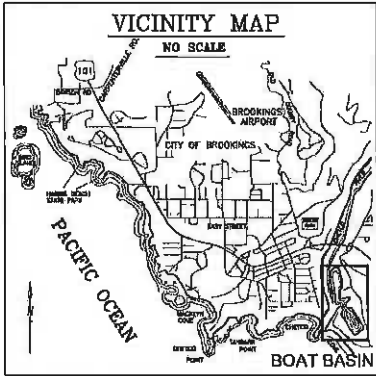
- COVER AND FRAME MAY EACH BE OF CAST IRON OR WELDED STEEL CONSTRUCTION.
- CONCRETE STRENGTH SHALL BE 8000 PSI WITH REIN. BUSH.
- JUNCTION BASIN AND GRATE SHALL MEET SLOPE LOOKING.
- A MINIMUM SLUMP DEPTH OF 12\"/>

**8 JUNCTION BASIN**  
 SCALE: NTS



EMC | **EMC** | **EMC**  
 ENGINEERS ARCHITECTS INC.  
 16350 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
 PORT OF BROOKINGS HARBOR BOAT YARD PAVING  
 DRAWN BY: JG  
 DATE: 11 MAY 2021  
 JOB No: #  
 SHEET No:  
**C6.1**  
 PROJECT DETAILS





PORT  
OF  
BROOKINGS  
HARBOR



PORT OF BROOKINGS-HARBOR  
2021 CIVIL IMPROVEMENTS

**SOUTH BASIN EMBANKMENT  
RECONSTRUCTION**

**NATURAL FEATURES**  
EXISTING NATURAL RESOURCES OR NATURAL HAZARDS ON THE SUBJECT PROPERTY, INCLUDING WETLANDS, STREAMS, RIPARIAN AREAS, FLOOD PLAINS, OR FLOODWAYS TO BE DETERMINED BY ENGINEER

**EXISTING TREE CANOPY**  
THERE ARE NO EXISTING TREES ON THE SUBJECT PROPERTY

**CULTURAL RESOURCES**  
LOCALLY, OR FEDERALLY DESIGNATED HISTORIC AND/OR CULTURAL RESOURCES ON THE SITE OR ON ADJACENT PARCELS TO BE DETERMINED BY ENGINEER.

**PUBLIC SERVICES**  
PUBLIC UTILITY SERVICES, INCLUDING WATER, SEWER, STORM DRAINAGE, POWER, TELEPHONE, CABLE INTERNET, AND GAS ARE AVAILABLE TO THE SUBJECT PROPERTY.

**UTILITY STATEMENT**  
EXISTING UNDERGROUND UTILITIES ILLUSTRATED IN THESE PLANS ARE APPROXIMATED BASED ON MAPS OBTAINED FROM CURRY COUNTY GIS ELEVATIONS ESTIMATES, OR HAVE BEEN LOCATED BY A UTILITY LOCATE COMPANY. LAYOUT INDICATED IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. ALL LINES WITHIN PROJECTED WORK ZONE SHALL BE FIELD VERIFIED AS REQUIRED PRIOR TO CONSTRUCTION.

**PROJECT DESCRIPTION**

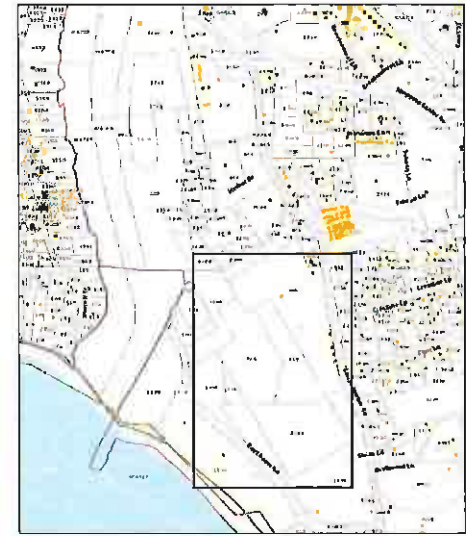
TITLE: SOUTH BASIN EMBANKMENT RECONSTRUCTION  
REFERENCE: PB113  
LOCATION: SOUTH BASIN  
TAX LOT(S): 401, 498, 1100, 1200, 1300, 1400

**DRAWING REGISTER**

PB113-C100	Cover sheet
PB113-C101	Notes
PB113-C102	Existing Condition
PB113-C102A	EXISTING EMBANKMENT VIEWS
PB113-C103	Embankment
PB113-C104	Details
PB113-C105	Plan details



PROJECT OVERVIEW  
SCALE 1":200'



PORT OF BROOKINGS HARBOR  
MAP OF TAX LOTS

**PRELIM GRADING NOTES**

1. DEQ 1200-C PERMIT IS REQUIRED.
2. UNLESS DIRECTED OTHERWISE, REMOVE CLEARED AND GRUBBED MATERIAL FROM THE SITE AND DISPOSE AT AN APPROVED LOCATION.
3. PRIOR TO THE START OF CONSTRUCTION, VERIFY GRADES AT SAWCUT LOCATIONS AND MATCHING OF EXISTING GRADE LOCATIONS.
4. MINIMIZE TRAFFIC ON SOIL AREAS DURING WET WEATHER. IF THE SITE SOILS ARE EXPOSED DURING WET WEATHER, THE USE OF CRUSHED ROCK PLACED AS ENGINEERED FILL IN THE BOTTOM OF THE EXCAVATIONS MAY BE NECESSARY TO PROTECT THE SUBGRADE. TAKE ALL PRECAUTIONS TO LIMIT SURFACE DISTURBANCE AND PROTECT THE SITE GRADING AREA FROM EROSION AND RUNOFF.
5. UNLESS OTHERWISE NOTED, THE SAMPLING AND TESTING OF MATERIALS FOR USE ON THE JOBSITE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. ALL TESTING OF MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY A CERTIFIED TESTER. RESULTS OF THE TESTS SHALL BE SENT DIRECTLY TO THE PROJECT ENGINEER AS WELL AS THE CONTRACTOR, BY THE LABORATORY. LOCATION AND FREQUENCY OF TESTS SHALL BE DESIGNATED BY THE GENERAL CONTRACTOR.
6. ALL CUT AND FILL SLOPES SHALL BE MAXIMUM OF 2:1.

LEGEND	
5	ELEVATION
---	SUBGRADE MINOR CONTOUR
---	SUBGRADE MAJOR CONTOUR
---	PARCEL
---	GEOTEXTILE
■	CONCRETE PAD
■	GRASS
■	JETTY
■	SLIP WAY
■	PAVED ROAD



DATE	12/8/2020
BY	INFRADRAFT
NO.	C-100
REV.	



PREPARED FOR: PORT OF BROOKINGS HARBOR  
PROJECT: SOUTH BASIN EMBANKMENT RECONSTRUCTION  
DATE: 12/8/2020  
BY: INFRADRAFT  
NO.: C-100  
REV.:  
FBI No. 113



177

**GENERAL NOTES**

These notes are intended for use in interpreting and implementing the tasks shown on the following construction plans and specifications sheets. These are in addition to the overall project specification and bid documents and contractual items.

These are intended for the use of the general contractor and his/her subcontractors in the demolition and reconstruction of the subject area of the Port of Brookings Harbor. Use for other purposes or at other sites is not recommended and is accomplished at the sole risk of the user.

These items are to be used as a supplement to the details provided on the plan sheets and specification pages. Any discrepancies found among the Drawings, the Specifications, referenced reports, these General Notes and other items listed on this sheet and the site conditions shall be reported to the Engineer, who shall correct such discrepancy in writing. Any work done by the General Contractor after discovery of such discrepancy shall be done at the General Contractor's risk. The General Contractor shall verify and coordinate dimensions among all drawings prior to proceeding with any work.

The embankment repair has been designed to resist anticipated vertical and lateral forces after the construction of all structural elements has been completed. Stability of the structure and slope areas prior to completion is the responsibility of the General Contractor. This responsibility includes, but is not limited to jobsite safety, construction means, methods, and sequences, temporary shoring, slope stability, formwork and bracing, use of equipment and construction procedures.

Construction observation by the Engineer is for checking for conformance with design aspects only and is not intended in any way to review and/or approve the General Contractor's construction procedures or relieve the contractor from providing a completed project, consistent with the plans and specifications and good construction practices. Special inspection by the engineer does not provide a certification of the project or relieve the contractor of all responsibility for a properly constructed project.

**Standards Used for Design**

All methods, materials and workmanship shall conform to the plans and specifications and ODOT Standard Specifications, unless elsewhere herein specified otherwise. International Building Code (IBC) 2009; 2010 Oregon Structure Specialty Code (OSSC); American Society of Civil Engineers (ASCE)

**Other Notes**

- Jobsite safety is the responsibility of the Contractor.
- All products and workmanship shall be new materials of good quality, acceptable for this type of construction. Work to be accomplished in a good and workmanlike manner.
- All materials to be shipped, handled and stockpiled in accordance with the manufacturers recommendations and good construction practices.
- Locations must be verified at the site with the geotechnical engineer and the Port of Brookings Harbor representative prior to placement.
- Abide by local, state and federal building ordinances, including all safety requirements, in all phases of the project.
- All phases of the project are to conform to the plans and specifications attached hereto and specifications provided by the owner and the engineer-of-record.
- Proposed changes to project plans and specifications must be approved by the designer prior to acceptance and implementation at the site.
- Proposed changes must be submitted in writing for review and approval/disapproval by the designer and the owner.
- In no case shall changes, substitutions or omissions be made to the design or materials without the written authorization of the designer and the owner.
- Authorization of a design change by the engineer does not constitute acceptance by the Port of Brookings Harbor, nor does it authorize additional funds for the changes. The Port's representative must authorize in writing the design change and applicable changes in the contract amount and/or construction time period prior to implementation of such changes.
- Project schedule and general sequencing of all work must be reviewed and approved by the design engineer and the owner. Such approval does not relieve the contractor or his/her subcontractors of all responsibilities for proper execution of the subject project construction.
- Sequencing of tasks that requires varying the installed sizes of project materials must be reviewed and approved by the design engineer and owner.
- Traffic control and signage must be provided by the contractor unless otherwise so stated in the contract. Access to the US Coast Guard facilities must be maintained during construction.
- Contractor must understand that the project site is in a Harbor area subject to tidal fluctuations. Therefore, sequencing and project work must take into account effects of high and low tides.
- Replacement of specified products by an "Equivalent" product must be approved by the design engineer and the owner. Redesign required for use of alternate "Equivalent" materials is to be borne by the contractor.

**GRADING NOTES**

- DEQ 1200-C PERMIT IS NOT REQUIRED.
- UNLESS DIRECTED OTHERWISE, REMOVE CLEARED AND GRUBBED MATERIAL FROM THE SITE AND DISPOSE AT AN APPROVED LOCATION.
- PRIOR TO THE START OF CONSTRUCTION, VERIFY GRADES AT SAWCUT LOCATIONS AND MATCHING OF EXISTING GRADE LOCATIONS.
- MINIMIZE TRAFFIC ON SOIL AREAS DURING WET WEATHER. IF THE SITE SOILS ARE EXPOSED DURING WET WEATHER, THE USE OF CRUSHED ROCK PLACED AS ENGINEERED FILL IN THE BOTTOM OF THE EXCAVATIONS MAY BE NECESSARY TO PROTECT THE SUBGRADE. TAKE ALL PRECAUTIONS TO LIMIT SURFACE DISTURBANCE AND PROTECT THE SITE GRADING AREA FROM EROSION AND RUNOFF.
- UNLESS OTHERWISE NOTED, THE SAMPLING AND TESTING OF MATERIALS FOR USE ON THE JOBSITE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. ALL TESTING OF MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY A CERTIFIED TESTER. RESULTS OF THE TESTS SHALL BE SENT DIRECTLY TO THE PROJECT ENGINEER AS WELL AS THE CONTRACTOR, BY THE LABORATORY. LOCATION AND FREQUENCY OF TESTS SHALL BE DESIGNATED BY THE GENERAL CONTRACTOR.
- ALL CUT AND FILL SLOPES SHALL BE MAXIMUM OF 2:1.

**EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN NOTES**

- PROJECT/PURPOSE - ITH THE PURPOSE OF MAINTAINING, REHABILITATING, REPLACING, AND UPGRADING THE EXISTING WESTERN EMBANKMENT AT THE SOUTH BASIN OF PORT OF BROOKINGS. THE EXISTING EMBANKMENT WILL BE CLEARED DOWN TO SUITABLE SUBGRADE AT A SLOPE BETWEEN 1.5:1 AND 2:1. A 4FT DEEP TRENCH WILL BE EXCAVATED AT THE BASE OF THE EMBANKMENT. A 3FT DEEP LAYER OF AGGREGATE WILL BE PLACED ON TOP OF THE SLOPE AND INTO THE TRENCH
- CONTRACTOR ACTIVITIES - CONTRACTOR ACTIVITIES ARE DESCRIBED AS EXCAVATION AND CLEARING USING A 25T EXCAVATOR. EXCAVATION AND SPREADING AT THE BASE OF THE SLOPE USING A LONG REACH EXCAVATOR. PLACEMENT OF GEOGRID. PLACEMENT OF CRUSHED AGGREGATE FROM FINE GRAVEL TO 2FT BOULDERS
- SOIL DISTURBING ACTIVITIES - EXCAVATION WILL BE LIMITED TO EXISTING MARINA EDGES AS SHOWN ON DRAWING C102
- NON-STORMWATER DISCHARGES - NO DEWATERING, WATER-LINE FLUSHING, PAVEMENT WASH WATERS OR IRRIGATION WATER DISCHARGES ARE PLANNED FOR THIS PROJECT
- ESTIMATED START DATE FOR CONSTRUCTION - 02/01/21 - 03/30/21
- NEAREST SURFACE WATER BODIES - PORT OF BROOKINGS ICE HOUSE INLET IN THE COMMERCIAL BASIN (SOUTH BASIN) AND THE SPORT BASIN, NEAR DOCK A (NORTH BASIN).
- RECEIVING WATERS - PACIFIC OCEAN
- SPECIAL ENVIRONMENTAL CONSIDERATIONS - SEE SECTION BELOW DESCRIBING PRECAUTION REGARDING CREOSOTE COATED PILES TO BE EXTRACTED. ESA OPINIONS PROVIDED BY USACE, NMFS AND ODFW.
- DESIGNATED EPCM - THE DESIGNATED EROSION AND POLLUTION CONTROL MANAGER (EPCM) WHO WILL ASSURE COMPLIANCE WITH ALL ITEMS IN THIS PLAN IS TED FITZGERALD, PORT DIRECTOR, OR HIS DESIGNEE.
- EROSION, SEDIMENTATION AND POLLUTION CONTROL BMPs - BEST MANAGEMENT PRACTICES (BMP) TO BE USED, WHEN APPLICABLE, TO PREVENT POLLUTION RELATED TO CONTRACTOR ACTIVITIES LISTED IN THIS SECTION ARE AS FOLLOWS: A) OFFSITE VEHICLE TRACKING AND DUST PREVENTION - MEASURES WILL BE TAKEN TO PREVENT OFFSITE TRACKING OF MATERIALS, INCLUDING SWEEPING PAVEMENTS, COVERING LOADS AND WETTING SOIL TO PREVENT DUST. THERE WILL BE NO AGGREGATE CONSTRUCTION. B) MATERIAL MANAGEMENT AND SPILL PREVENTION - ALL ON SITE FUELS WILL BE DELIVERED, HANDLED, STORED, USED, AND APPLIED SO AS NOT TO BE RELEASED INTO THE WATERS OF THE STATE/US. FUELING WILL BE ACCOMPLISHED AWAY FROM THE WORK AREA A SPILL CLEANUP KIT WILL BE AVAILABLE IF DEEMED BY THE EPCM TO BE REQUIRED. C) WASTE MANAGEMENT - HANDLING, STORAGE AND DISPOSAL OF SOLID WASTE AND/OR HAZARDOUS WASTE WILL BE DISPOSED INTO SUITABLE LANDFILL OFFSITE D) INSPECTION AND MAINTENANCE - DAILY INSPECTION AND MAINTENANCE FOR ALL CONTROLS INCLUDED IN THE POLLUTION CONTROL PLAN AND THE EPCP WILL BE PERFORMED BY THE EPCM OR HIS DESIGNEE. E) EMPLOYEE AND SUBCONTRACTOR TRAINING - EMPLOYEE AND SUBCONTRACTOR EDUCATION AT A MINIMUM WILL INCLUDE INFORMING PERSONNEL OF THE POSTED LOCATIONS OF THE POLLUTION CONTROL PLAN/EROSION AND SEDIMENT CONTROL PLAN/MSDS'S AND IMPORTANT EMERGENCY PHONE NUMBERS. EDUCATION WILL ALSO INCLUDE INFORMING PERSONNEL OF REVISED MATERIAL MANAGEMENT PROCEDURES FOLLOWING A SPILL F) (CRITERIA 15) PRECONSTRUCTION ACTIVITY - BEFORE ALTERATION OF THE ACTION AREA, FLAG THE BOUNDARIES OF CLEARING LIMITS ASSOCIATED WITH SITE ACCESS AND CONSTRUCTION TO MINIMIZE SOIL AND VEGETATION DISTURBANCE, AND ENSURE THAT ALL TEMPORARY EROSION CONTROLS ARE IN PLACE AND FUNCTIONAL. G) (CRITERIA 16) SITE PREPARATION - DURING SITE PREPARATION, CONSERVE NATIVE MATERIALS FOR RESTORATION, INCLUDING LARGE WOOD, VEGETATION, TOPSOIL AND CHANNEL MATERIALS (GRAVEL, COBBLE AND BOULDERS) DISPLACED BY CONSTRUCTION. WHENEVER PRACTICAL, LEAVE NATIVE MATERIALS WHERE THEY ARE FOUND AND IN AREAS TO BE CLEARED, CLIP VEGETATION AT GROUND LEVEL TO RETAIN ROOT MASS AND ENCOURAGE REESTABLISHMENT OF NATIVE VEGETATION. BUILDING AND RELATED STRUCTURES MAY NOT BE CONSTRUCTED INSIDE THE RIPARIAN MANAGEMENT AREA H) (CRITERIA 17) HEAVY EQUIPMENT - HEAVY EQUIPMENT WILL BE SELECTED AND OPERATED AS NECESSARY TO MINIMIZE ADVERSE EFFECTS ON THE ENVIRONMENT; AND ALL VEHICLES AND OTHER HEAVY EQUIPMENT WILL BE USED AS FOLLOWS: (A.) STORED, FUELED AND MAINTAINED IN A VEHICLE STAGING AREA PLACED 150 FEET OR MORE FROM ANY WATERBODY, OR IN AN ISOLATED HARD ZONE SUCH AS A PAVED PARKING LOT. (B.) INSPECTED DAILY FOR FLUID LEAKS BEFORE LEAVING THE VEHICLE STAGING AREA FOR OPERATION WITHIN 50 FEET OF ANY WATERBODY. (C.) STEAM-CLEANED BEFORE OPERATION BELOW ORDINARY HIGH WATER, AND AS OFTEN AS NECESSARY DURING OPERATION TO REMAIN FREE OF ALL EXTERNAL OIL, GRASS, MUD, SEEDS, ORGANISMS AND OTHER VISIBLE CONTAMINANTS. (D.) GENERATORS, CRANES AND ANY OTHER STATIONARY EQUIPMENT OPERATED WITHIN 150 FEET OF ANY WATERBODY WILL BE MAINTAINED AND PROTECTED AS NECESSARY TO PREVENT LEAKS AND SPILLS FROM ENTERING THE WATER I) (CRITERIA 18)

IN-WATER WORK PERIOD - ALL WORK WITHIN THE ACTIVE CHANNEL WILL BE COMPLETED IN ACCORDANCE WITH THE OREGON GUIDELINES FOR TIMING OF IN-WATER WORK TO PROTECT FISH AND WILDLIFE RESOURCES (ODFW 2000, OR THE MOST RECENT VERSION).

J) (CRITERIA 21) EMBANKMENT INSTALLATION - <TBC>

K) (CRITERIA 24) SUBGRADE PREPARATION - <TBC>



PORT OF BROOKINGS  
18500 Lower Harbor Rd. Brookings, OR 97515

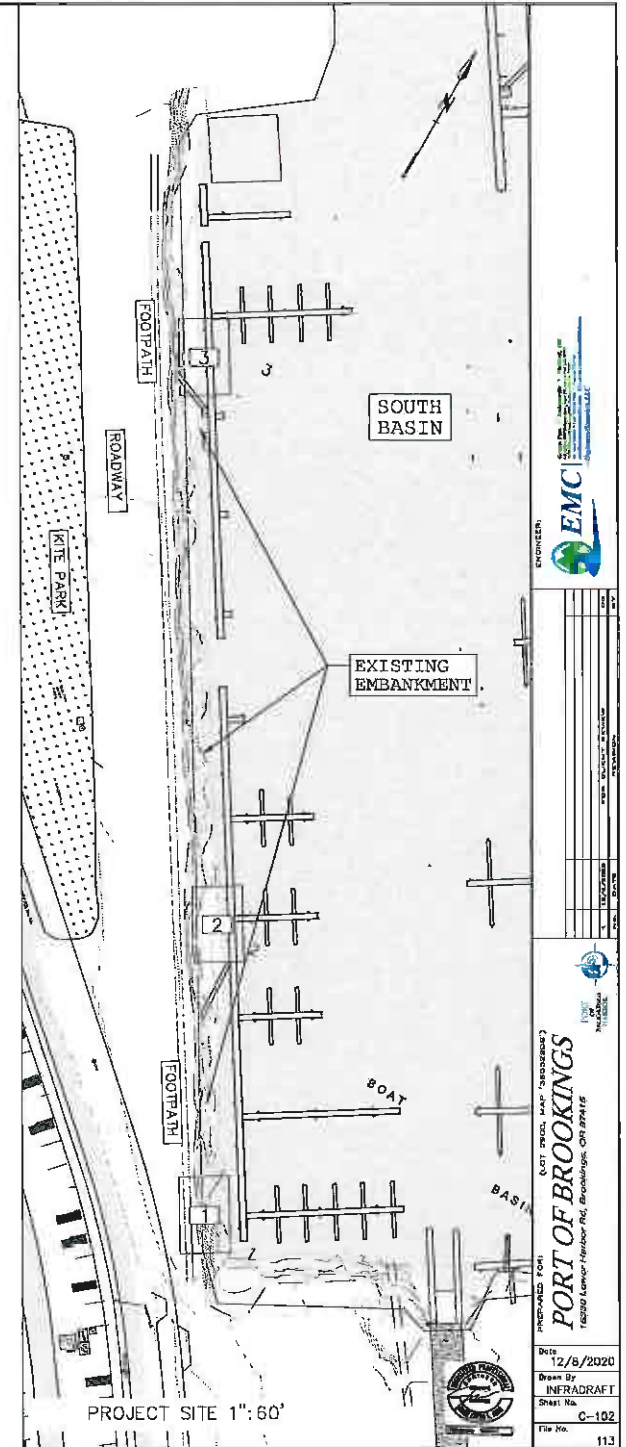
Date: 12/8/2020  
Drawn By: INFRA-DRAFT  
Sheet No.: C-101  
File No.: 113

178



EXISTING CONDITIONS  
SCALE 1" : 100'

179



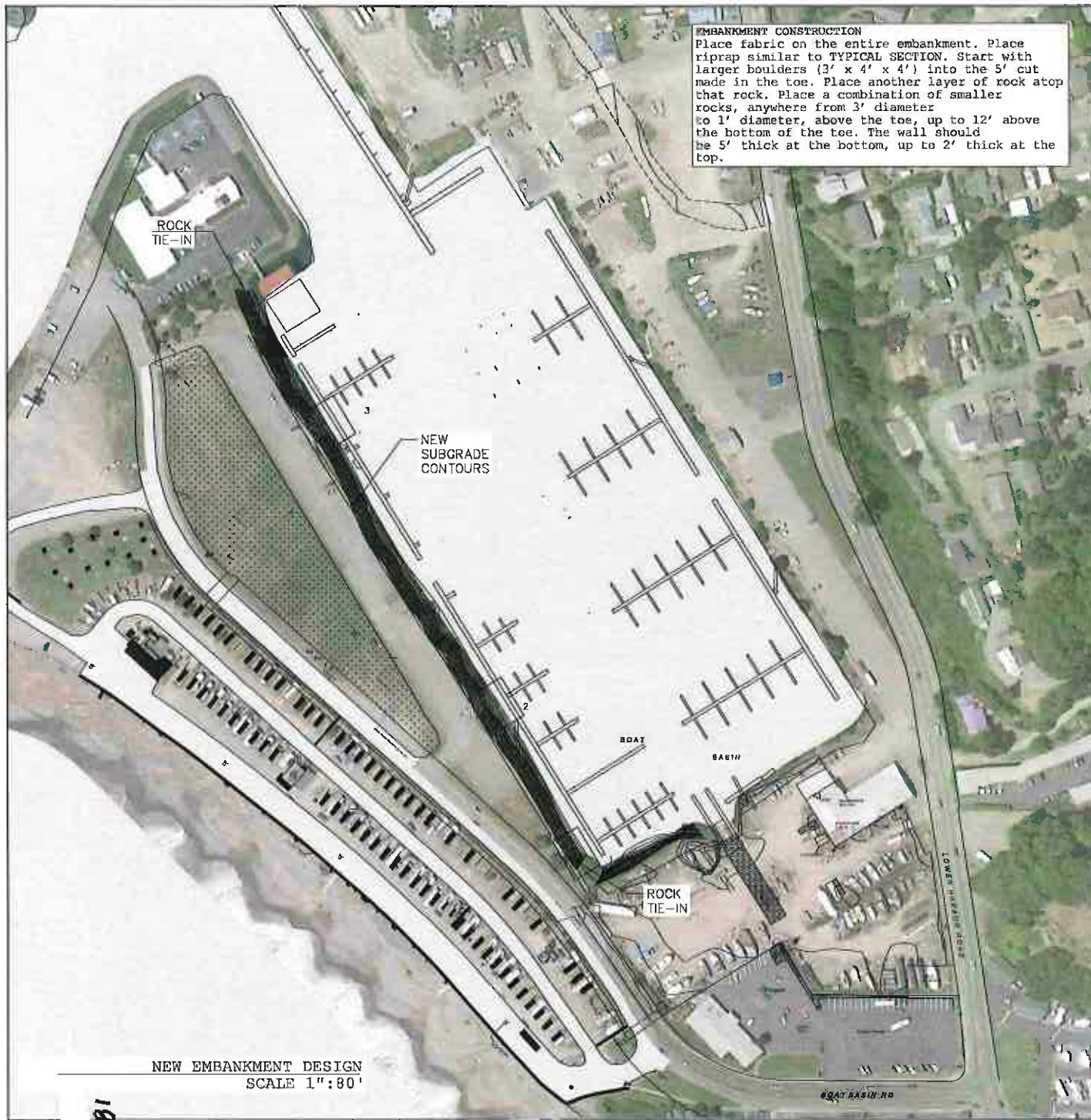
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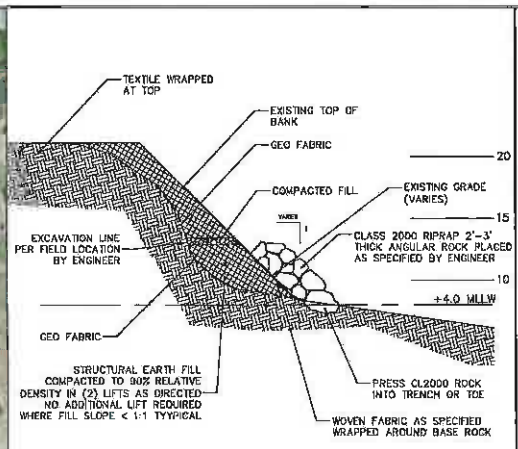
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Date: 12/8/2020  
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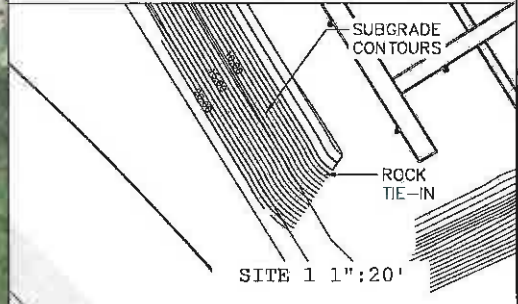




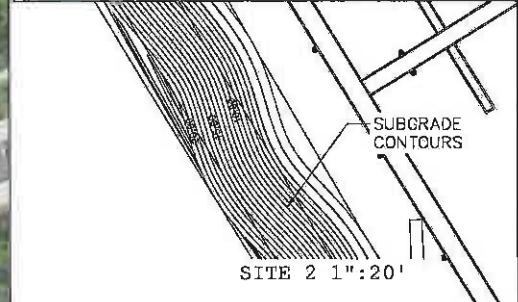
**EMBANKMENT CONSTRUCTION**  
 Place fabric on the entire embankment. Place riprap similar to TYPICAL SECTION. Start with larger boulders (3' x 4' x 4') into the 5' cut made in the toe. Place another layer of rock atop that rock. Place a combination of smaller rocks, anywhere from 3' diameter to 1' diameter, above the toe, up to 12' above the bottom of the toe. The wall should be 5' thick at the bottom, up to 2' thick at the top.



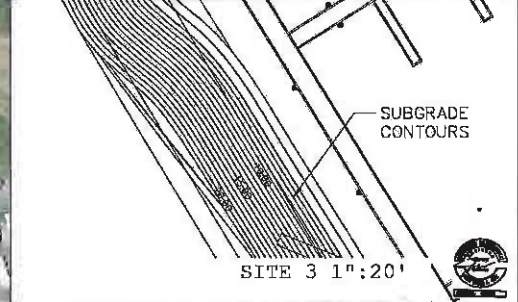
TYPICAL EMBANKMENT CROSS-SECTION



SITE 1 1":20'



SITE 2 1":20'



SITE 3 1":20'

NEW EMBANKMENT DESIGN  
 SCALE 1"=80'

181



PROJECT NO.	DATE
CLIENT	SCALE
DESIGNER	DATE
CHECKER	DATE
APPROVER	DATE

PREPARED FOR: GUY FOKO, WAP (BOARDS) PORT OF BROOKINGS  
 1800 Lower Harbor Rd, Brookings, OR 97515

Date: 12/8/2020  
 Drawn By: INFRADRAFT  
 Sheet No.: C-103  
 File No.: 113

**Design Specifics of Rock & Construction**

The rock used (if 406 Mitigation is approved) for this project will be specified to follow test requirements found within AASHTO 85 (Apparent specific gravity, percent absorption); ODOT TM 209A (degradation); and AASHTO T 104 (soundness). All rock specified in this project must be angular in shape, and the thickness of any single rock shall not be less than one third of its length. Round rock will not be accepted unless authorized by EMC. The rock must meet the gradation requirements for the class specified, be free from overburden, spoiled, shale and organic material. Non-durable rock, shale or rock with shale seams is not acceptable. Class 2000 rip rap is by definition comprised of rocks that are 20% by weight of 1400 pounds to 2000 pounds, 30% by weight of 700 to 1400 pounds, 40% by weight 40 to 700 pounds and 0 to 10% 0 to 40 pounds. Either a filter blanket of 16 inch layer of class 50, or specified filter fabric will be laid beneath the rock.

A clamshell, orange peel bucket, skip or similar approved device will be used which will transport the riprap material to its final destination. This revetment repair is for flow assumed to generally be uniform, steady and subcritical. However, rapidly varying, unsteady flow conditions occur occasionally, and excessive wave action, hydraulic jumps and extreme flow turbulence can occur at this location. These conditions are among the reasons for the extent of protection proposed. The longitudinal extent of this repair should be continuous for a distance greater than the length that is impacted. The vertical extent of protection required for this revetment includes design height and foundation or toe depth. The design height of the rip rap installation is to be equal to the design high water elevation (King tide plus storm surge) with adequate freeboard to accommodate wave action, super elevation from the channel bend, hydraulic jump, and flow irregularities, plus erratic phenomena such as unforeseen embankment settlement, accumulation of trash and debris from the river.

Scour depth is estimated at about 4 feet from the lowest elevation in the cross-section of the basin at this point, utilizing the conservative assumption of median diameter of bed material to be about 0.15 m. Riprap thickness for Class 2000 is specified to be at least a 4 foot layer.

The filter beneath the riprap and overlying the structural fill is to prevent the migration of fine soil particles through structural voids and to distribute the weight of the armor units (riprap) to provide more uniform settlement, and also permits relief of hydrostatic pressures within the soils.

For the areas above the waterline at any given time the fabric or geotextile also prevents surface water from causing erosion beneath the rip rap. In addition to toe considerations with respect to scour the flanks of this revetment are designed for upstream and downstream conditions

**General Construction, Erosion & Control Notes**

Final bank slope will be between 1V:1.5H and 1V:2H. Bank preparation will consist of clearing debris and minor grading. Riprap placement will be by machine placing and hand placing. Hand placing will be performed as specified by EMC on steeper side slopes. Re-handling or dragging to smooth revetment services tend to result in segregation and breakage of stone and are to be avoided. Stone will not be dropped from an excessive height.

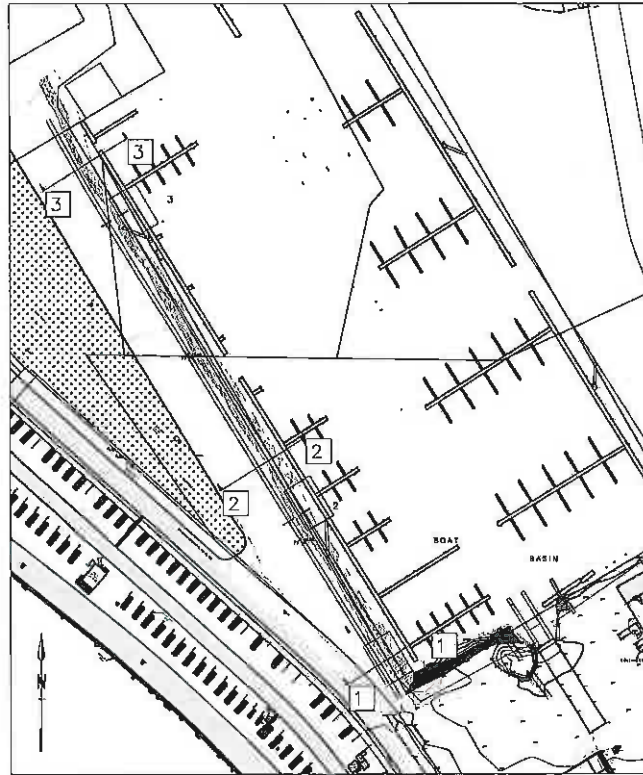
Actions that will require the use of materials that are hazardous or toxic to aquatic life (such as motor fuel, oil, or drilling fluid), are included within the pollution and erosion control plan sections of this narrative, to be managed by EMC and enforced by the Port of Brookings-Harbor. The plan includes practices to minimize erosion and sedimentation associated with all aspects of the project (e.g., staging areas, stockpiles, grading); to prevent debris from dropping or otherwise entering any stream or waterbody; and to prevent and control hazardous material spills.

Erosion controls will be monitored and maintained daily during the rainy season and weekly during the dry season as necessary to ensure controls are properly functioning. If monitoring shows that the erosion controls are ineffective at preventing visible sediment discharge, the project will stop to evaluate erosion control measures. Repairs, replacements or the installation of additional erosion control measures will be completed before the project resumes.

If applicable, maintenance will include removal of sediment and debris from erosion controls like silt fences or hay bales once it has reached one-third of the exposed height of the control. Whenever practical, native materials are to be left where they are found and in areas to be cleared, vegetation is to be clipped at ground level to retain root mass and encourage reestablishment of native vegetation.

Heavy equipment will be selected and operated as necessary to minimize adverse effects on the environment (e.g., minimally-sized, low pressure tires, minimal hard turn paths for tracked vehicles, temporary mats or plates within wet areas or sensitive soils); and all vehicles and other heavy equipment will be used as follows:

- 1) Stored, fueled and maintained in a vehicle staging area placed 150 feet or more from any waterbody, or in an isolated hard zone such as a paved parking lot, or lined surface;
- 2) Inspected daily for fluid leaks before leaving the vehicle staging area for operation within 50 feet of any waterbody;
- 3) Steam-cleaned before operation below ordinary high water, and as often as necessary during operation to remain free of all external oil, grease, mud, seeds, organisms and other visible contaminants and
- 4) Generators, cranes and any other stationary equipment operated within 150 feet of any waterbody will be maintained and protected as necessary to prevent leaks and spills from entering the water.



SITES 1, 2, 3 SECTION LINES

**Nonwoven Geotextile**

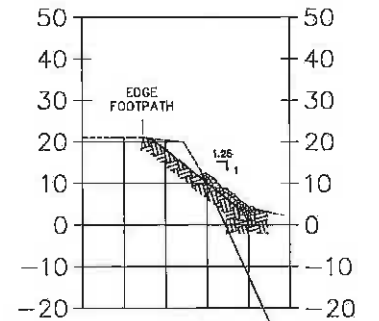
TYPE APPROVED - CUT 2013-01-018 US 300NW is a nonwoven needlepunched geotextile made of 100% polypropylene staple filaments. US 300NW resists ultraviolet and biological deterioration, rotting, naturally encountered bases and acids. Polypropylene is stable within a pH range of 2 to 13. US 300NW meets the following M.A.R.V. values except where noted:



PROPERTY	TEST METHOD	ESTABLISH	METRIC
Weight - Typical	ASTM D-5261	12 oz/yd <sup>2</sup>	407 g/m <sup>2</sup>
Tensile Strength	ASTM D-4632	2500 lbs	1,135 N
Elongation @ Break	ASTM D-4632	50%	50%
Apden Hard*	ASTM D-3786*	580 psi	3,999 kPa
Puncture Strength*	ASTM D-3835*	180 lbs	801 N
CHR Puncture	ASTM D-6241	850 lbs	3,782 N
Trapezoidal Tear	ASTM D-4533	115 lbs	511 N
Apparent Opening Size	ASTM D-4751	100 US Sieve 0.150 mm	
Permeability	ASTM D-4391	1.00 Sec-1	1.00 Sec-1
Water Flow Rate	ASTM D-4491	75 g/min/ft <sup>2</sup>	3,025 l/min/m <sup>2</sup>
UV Resistance @ 500 Hours	ASTM D-4355	70%	70%

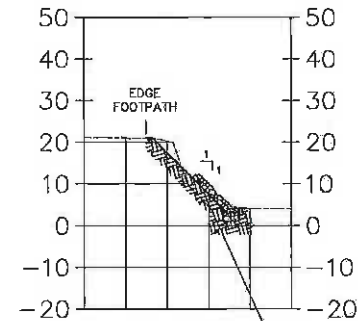
**ROLL SIZE ROLL DIAMETER AREA WEIGHT**  
 (1.5' x 267' 25.0 in) 500 sq yds 280 lbs  
 (1.5' x 307' 25.0 in) 580 sq yds 280 lbs

VOLUME REPORT	
(APPROXIMATE)	
GEOTEXTILE FABRIC	4498 SQ YD
CLASS 2000 RIP RAP	2462.34 CU YD
CUT	1792 CU YD
FILL	966 CU YD



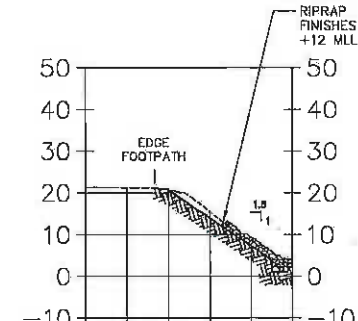
SITE 3

RIPRAP FINISHES +12 MLLW



SITE 2

RIPRAP FINISHES +12 MLLW



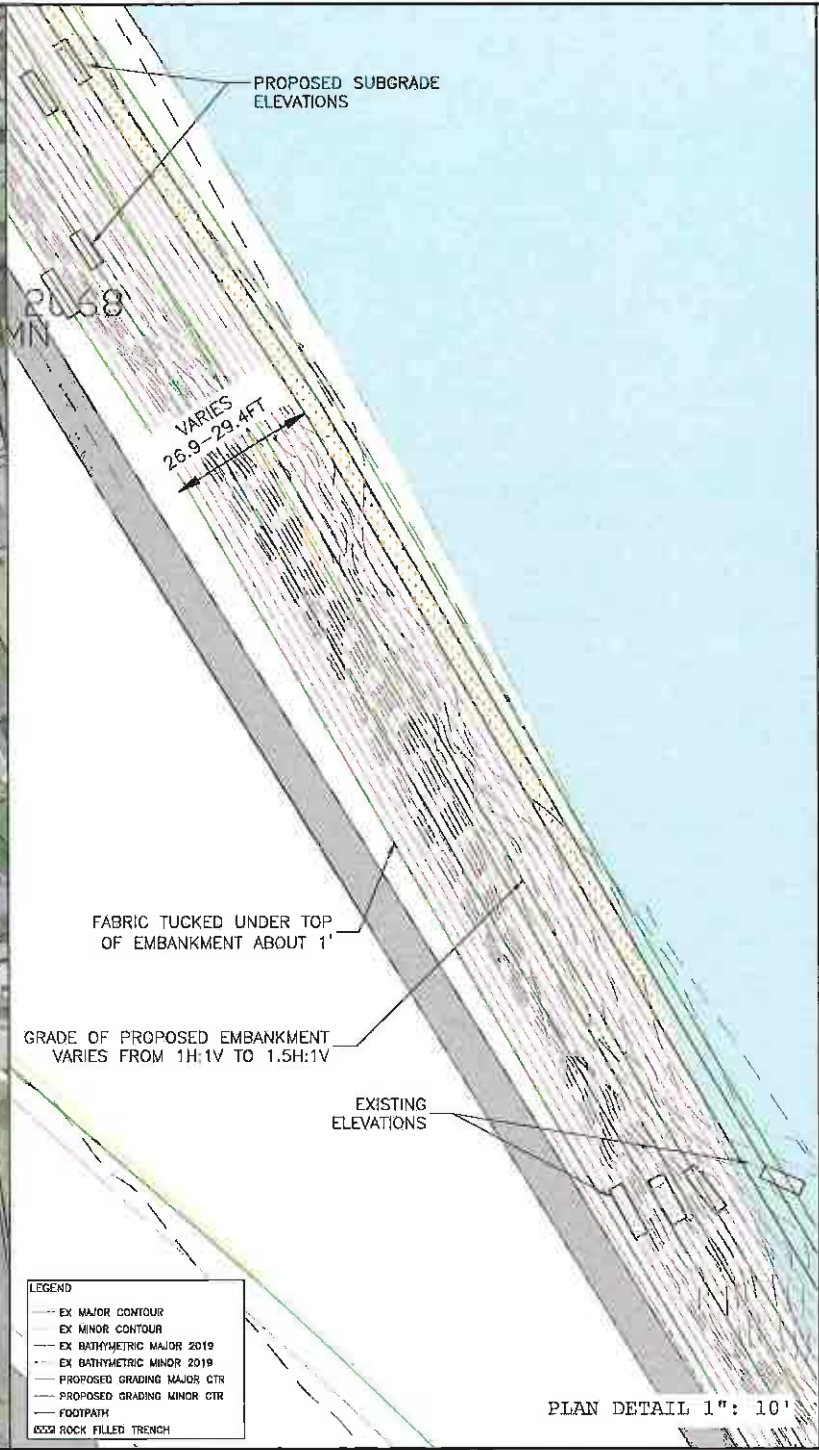
SITE 1

CROSS-SECTIONS NTS

**EMC**  
 ENVIRONMENTAL MANAGEMENT CORPORATION  
 1010 S. BROADWAY, SUITE 100, BROOKINGS, SD 57003  
 TEL: 605/635-6600 FAX: 605/635-6601  
 WWW.EMC-CORP.COM

---

PREPARED FOR: PORT OF BROOKINGS  
 12/8/2020  
 Drawn By: INFRADRAFT  
 Sheet No.: C-104  
 File No.: 113



- LEGEND**
- EX MAJOR CONTOUR
  - EX MINOR CONTOUR
  - EX BATHYMETRIC MAJOR 2019
  - EX BATHYMETRIC MINOR 2019
  - PROPOSED GRADING MAJOR CTR
  - PROPOSED GRADING MINOR CTR
  - FOOTPATH
  - 6522 ROCK FILLED TRENCH

NEW AND EXISTING CONTOURS  
SCALE 1"=80'

PLAN DETAIL 1"= 10'



DATE	BY	REVISION



PREPARED FOR  
**PORT OF BROOKINGS**  
1628D Lower Harbor Rd, Brookings, OR 97515

Date: 12/27/2020  
Drawn By: INFRADRAFT  
Sheet No.: C105  
File No.: 113



SHEET INDEX	
C0.0	COVER SHEET
C1.0	EXISTING CONDITIONS
C2.0	OPTION 1 ROCK WALL

REVISIONS	BY	DATE

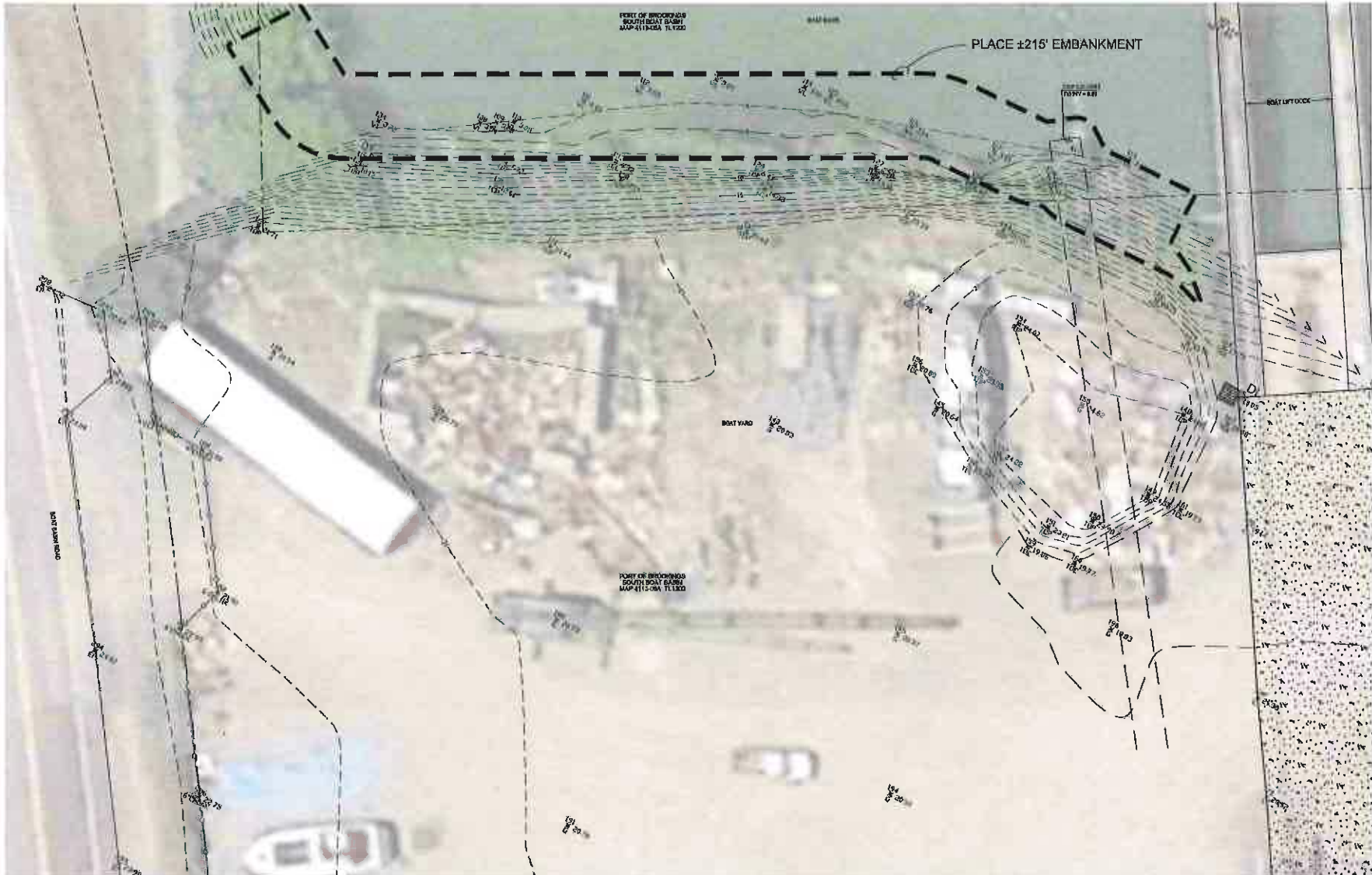
Curtis R. Jackson, P.E. • Mechanical, OR  
 4000 NE Oregon Street, Suite 200, Brookings, OR 97515  
 Phone: 541-338-2222 • Fax: 541-338-2223  
 www.EngineersScientists.com • EngineersScientists, LLC



**PORT OF BROOKINGS HARBOR**  
 1630 LOWER HARBOR WALK, BROOKINGS, OR 97415  
**SOUTH BOAT BASIN WALL**

DRAWN BY:	JLB
DATE:	18 APR 2021
JOB No:	6
SHEET No:	
<b>C0.0</b>	
COVER SHEET	





**SURVEY BY**  
 ROURA & ASSOCIATES LAND SURVEYING, INC.  
 111 BRUCE STREET  
 BROOKINGS, OR 97415  
 (503) 468-0182

**HORIZONTAL DATUM**  
 OREGON COORDINATE REFERENCE SYSTEM (OREGON COAST)  
 ZONES 48 NORTH AND 49 SOUTH  
 734-955-0000 THROUGH 734-955-0015. COORDINATES WERE  
 CONTRIBUTED TO THE OREGON REALTIME (ORRT) REFERENCE  
 NETWORK (ORRN) REFERENCED TO NAVD83(11) UTM ZONE 50N,  
 INTERNATIONAL FEET, WITH A RELATIVE ACCURACY OF ±2cm.

**VERTICAL DATUM**  
 MEAN LOWER LOW WATER FROM 1982-2001  
 BENCH MARK UTILIZED FOR THIS SURVEY  
 US ARMY CORPS OF ENGINEERS  
 BENCH MARK - TUBEL 2"  
 ELEVATION - 11.58 FEET

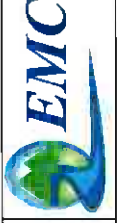


**EXISTING CONDITIONS**  
 SCALE: 1" = 20' (24/30)



REVISION	DATE

Greater Pass • Jacksonville • Newland, OK  
 4000 West 10th Street, Suite 100  
 Newland, OK 74755  
 Phone: 405-883-1111  
 Fax: 405-883-1112  
 Email: info@emc-engineers.com  
**EMC** - Engineers/Scientists, LLC

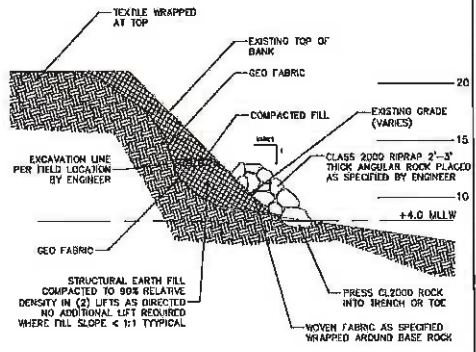
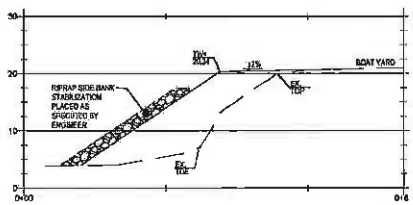
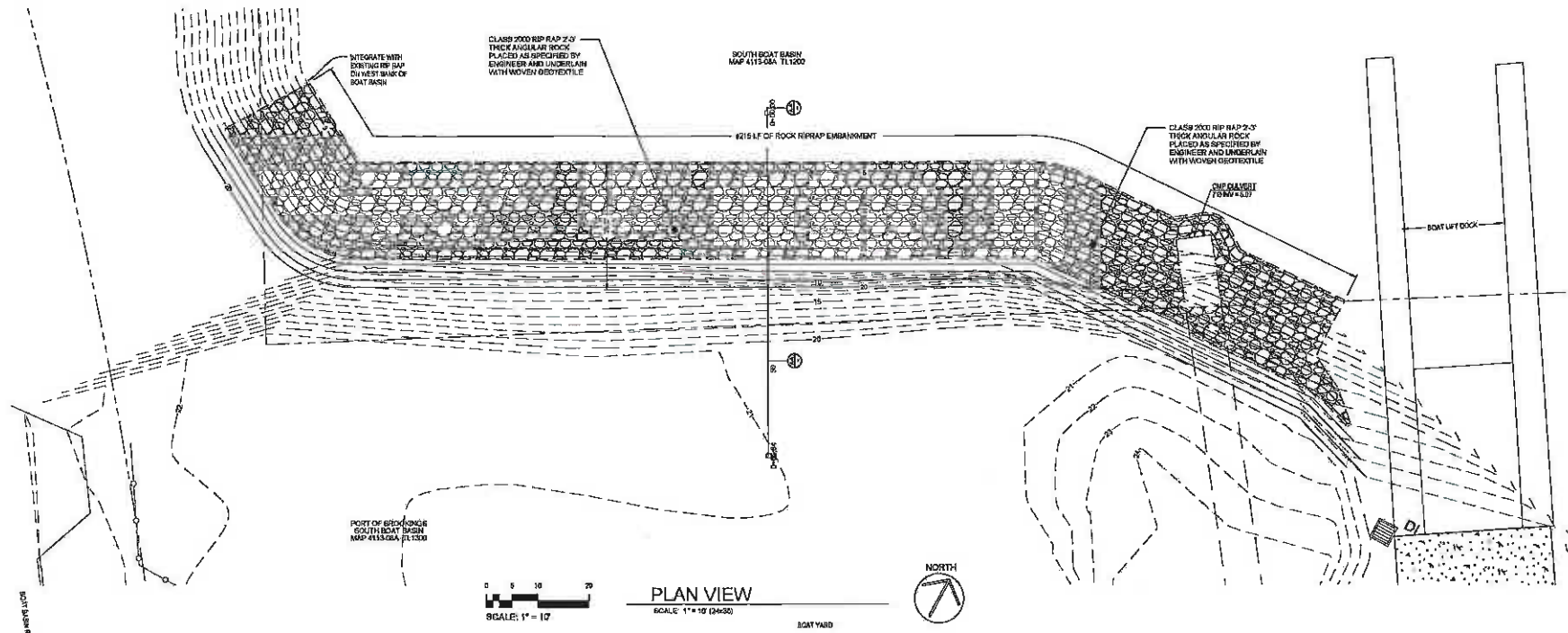


**PORT OF BROOKINGS HARBOR**  
 1830 LOWER HARREL AVENUE, BROOKINGS, OR 97415  
**SOUTH BOAT BASIN WALL**

DRAWN BY: JO  
 DATE: 10 APR 2021  
 JOB No: #  
 SHEET No: #

**C1.0**  
 EXISTING  
 CONDITIONS

185



PLACE FABRIC ON THE ENTIRE EMBANKMENT. PLACE RRRAP SIMILAR TO TYPICAL SECTION. START WITH LARGER ROCKS (6" x 4") INTO THE 6" CUT MADE IN THE TOE. PLACE ANOTHER LAYER OF ROCK AT TOP THAT ROCK. PLACE A DISTRIBUTION OF SMALLER ROCKS ANYWHERE FROM 3" DIAMETER TO 1' QUANTIES ABOVE THE TOE. UP TO 12" ABOVE THE BOTTOM OF THE TOE. THE WALL SHOULD BE 2" THICK AT THE BOTTOM UP TO 2' THICK AT THE TOP.

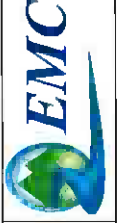
EMBANKMENT CONSTRUCTION NOTES

PROPOSED ROCK EMBANKMENT - OPTION 4

A-A ROCK EMBANKMENT - SECTION A-A

REVISIONS

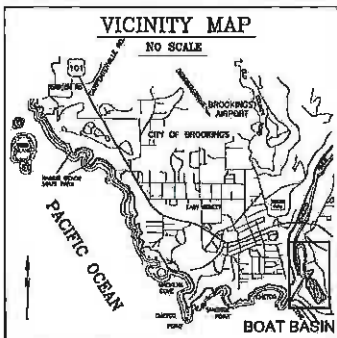
Grant Pass • Jacksonville • Newford, OR  
 EMC  
 - Engineers/Architects, LLC



PORT OF BROOKINGS HARBOR  
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
 SOUTH BOAT BASIN WALL

DRAWN BY: JG  
 DATE: 16 APR 2021  
 JOB No: #  
 SHEET No:

C2.0  
 OPTION 4  
 ROCK WALL



PORT  
OF  
BROOKINGS  
HARBOR



PORT OF BROOKINGS-HARBOR  
2021 CIVIL IMPROVEMENTS

PROPOSED ROAD

NATURAL FEATURES

EXISTING NATURAL RESOURCES OR NATURAL HAZARDS ON THE SUBJECT PROPERTY, INCLUDING WETLANDS, STREAMS, RIPARIAN AREAS, FLOOD PLAINS, OR FLOODWAYS TO BE DETERMINED BY ENGINEER

EXISTING TREE CANOPY

THERE ARE NO EXISTING TREES ON THE SUBJECT PROPERTY

CULTURAL RESOURCES

LOCALLY, OR FEDERALLY DESIGNATED HISTORIC AND/OR CULTURAL RESOURCES ON THE SITE OR ON ADJACENT PARCELS TO BE DETERMINED BY ENGINEER.

PUBLIC SERVICES

PUBLIC UTILITY SERVICES, INCLUDING WATER, SEWER, STORM DRAINAGE, POWER, TELEPHONE, CABLE INTERNET, AND GAS ARE AVAILABLE TO THE SUBJECT PROPERTY.

UTILITY STATEMENT

EXISTING UNDERGROUND UTILITIES ILLUSTRATED IN THESE PLANS ARE APPROXIMATED BASED ON MAPS OBTAINED FROM CURRY COUNTY GIS ELEVATIONS ESTIMATES, OR HAVE BEEN LOCATED BY A UTILITY LOCATE COMPANY. LAYOUT INDICATED IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. ALL LINES WITHIN PROJECTED WORK ZONE SHALL BE FIELD VERIFIED AS REQUIRED PRIOR TO CONSTRUCTION.

PROJECT DESCRIPTION

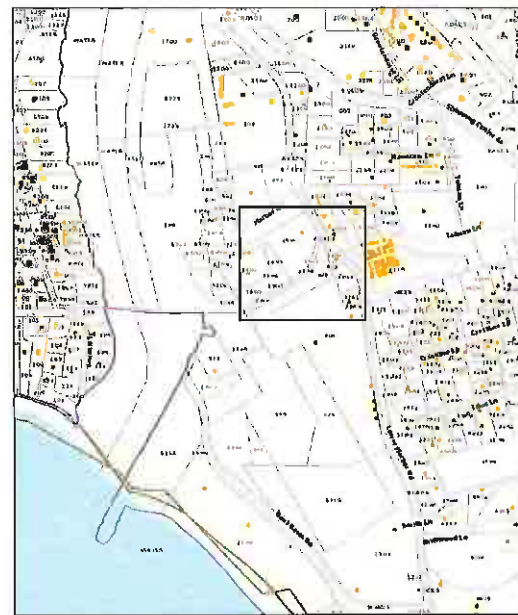
TITLE: PROPOSED ROAD  
REFERENCE: 140  
LOCATION: HARBOR ST  
TAX LOT(S): 2500, 2600, 2700, 2800  
2900, 2999, 402

DRAWING REGISTER

140-CV	COVER SHEET
140-C100	NOTES
140-C101	EXISTING CONDITIONS
140-C102	PROPOSED GRADING
140-C103	PROPOSED PAVING
140-C104	PROPOSED DRAINAGE
140-C105	DETAILS
140-C106	DETAILS



PROJECT OVERVIEW  
SCALE 1" : 200'



PORT OF BROOKINGS HARBOR  
MAP OF TAX LOTS

PRELIM GRADING NOTES

1. DEQ 1200-C PERMIT IS REQUIRED.
2. UNLESS DIRECTED OTHERWISE, REMOVE CLEARED AND GRUBBED MATERIAL FROM THE SITE AND DISPOSE AT AN APPROVED LOCATION.
3. PRIOR TO THE START OF CONSTRUCTION, VERIFY GRADES AT SAWCUT LOCATIONS AND MATCHING OF EXISTING GRADE LOCATIONS.
4. MINIMIZE TRAFFIC ON SOIL AREAS DURING WET WEATHER. IF THE SITE SOILS ARE EXPOSED DURING WET WEATHER, THE USE OF CRUSHED ROCK PLACED AS ENGINEERED FILL IN THE BOTTOM OF THE EXCAVATIONS MAY BE NECESSARY TO PROTECT THE SUBGRADE. TAKE ALL PRECAUTIONS TO LIMIT SURFACE DISTURBANCE AND PROTECT THE SITE GRADING AREA FROM EROSION AND RUNOFF.
5. UNLESS OTHERWISE NOTED, THE SAMPLING AND TESTING OF MATERIALS FOR USE ON THE JOBSITE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. ALL TESTING OF MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY A CERTIFIED TESTER. RESULTS OF THE TESTS SHALL BE SENT DIRECTLY TO THE PROJECT ENGINEER AS WELL AS THE CONTRACTOR, BY THE LABORATORY. LOCATION AND FREQUENCY OF TESTS SHALL BE DESIGNATED BY THE GENERAL CONTRACTOR.
6. ALL CUT AND FILL SLOPES SHALL BE MAXIMUM OF 2:1.

LEGEND	
5	ELEVATION
---	SUBGRADE MINOR CONTOUR
---	SUBGRADE MAJOR CONTOUR
---	PARCEL
---	GEOTEXTILE
■	CONCRETE PAD
■	GRASS
■	JETTY
■	SLIP WAY
■	PAVED ROAD



ENGINEER:



DATE: \_\_\_\_\_

BY: \_\_\_\_\_

REVISION

PREPARED FOR: (LOT 2800, MAP 380022019)  
**PORT OF BROOKINGS**  
16330 Lower Harbor Rd, Brookings, OR 97415

Date: 04/04/2021  
Drawn By: INFRA DRAFT  
Sheet No.: CV  
File No.: 140

**GRADING NOTES**

1. PRIOR TO THE CONSTRUCTION OF EMBANKMENTS, THE CONTRACTOR SHALL EXCAVATE UNSUITABLE FOUNDATION MATERIAL. BASEMENTS, TRENCHES AND HOLES ENCOUNTERED WITHIN EMBANKMENT LIMITS SHALL BE FILLED WITH APPROVED MATERIAL. PRIOR TO BACKFILLING THE CONTRACTOR SHALL BREAK CONCRETE FLOORS OF BASEMENTS AS DIRECTED. THE CONTRACTOR SHALL BREAK UP AND ROUGHEN THE GROUND SURFACE BEFORE EMBANKMENTS MATERIAL IS PLACED THE NATURAL GROUND UNDERLYING EMBANKMENTS SHALL BE COMPACTED TO THE DENSITY SPECIFIED FOR THE EMBANKMENT MATERIALS TO BE PLACED, AND TO THE DEPTH OF THE GRUBBING OR A MINIMUM OF 6 INCHES.
2. EMBANKMENT CONSTRUCTION SHALL INCLUDE PREPARATION OF THE AREAS UPON WHICH EMBANKMENTS ARE PLACED, THE PLACEMENT AND COMPACTION OF APPROVED EMBANKMENT MATERIALS AND FILLING OF HOLES, PITS AND OTHER DEPRESSIONS WITHIN THE SUBDIVISION.
3. THE CONTRACTOR SHALL PLACE EMBANKMENTS AND FILLS IN THE HORIZONTAL LAYERS OF 8 INCHES MAXIMUM DEPTH AND COMPACT EACH LAYER TO THE DENSITY SPECIFIED.
4. EMBANKMENT SHALL NOT BE CONSTRUCTED WHEN THE EMBANKMENT MATERIAL OR THE FOUNDATION ON WHICH THE EMBANKMENT WOULD BE PLACED IS FROZEN.
5. IMMEDIATELY PRIOR TO COMPLETION OF THE EARTHWORK, THE CONTRACTOR SHALL CLEAN THE ENTIRE WORK AREA OF DEBRIS AND FOREIGN MATTER.
6. THE MAXIMUM DENSITY OF COMPACTED MATERIAL WILL BE DETERMINED BY AASHTO T-99
7. THE CONTRACTOR SHALL COMPACT ALL EMBANKMENTS, FILLS AND BACKFILLS TO A MINIMUM IN PLACE DENSITY OF 95 PERCENT.
8. THE CONTRACTOR SHALL WATER THE MATERIALS TO PROVIDE OPTIMUM MOISTURE FOR COMPACTION OF EMBANKMENT AND BACKFILLS. EMBANKMENTS OD BACKFILL MATERIALS SHALL NOT BE PLACED IN FINAL POSITION UNTIL MOISTURE IN EXCESS OF OPTIMUM MOISTURE HAS BEEN REMOVED.
9. IF THE SPECIFIED COMPACTION IS NOT OBTAINED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER. THE CONTRACTOR MAY BE REQUIRED TO USE A MODIFIED COMPACTION PROCEDURE OR APPLY ADDITIONAL COMPACTIVE EFFORT. IF APPROVED MATERIALS MEETING THE SPECIFICATIONS CANNOT BE COMPACTED TO THE REQUIRED DENSITY REGARDLESS OF COMPACTIVE EFFORT OR METHOD, THE ENGINEER MAY REDUCE THE REQUIRED DENSITY OR DIRECT THE ALTERNATE MATERIALS BE USED. IN NO CASE SHALL EARTHWORK OPERATIONS PROCEED UNTIL THE CONTRACTOR IS ABLE TO COMPACT THE MATERIAL TO THE SATISFACTION OF THE ENGINEER.
10. DEQ 1200-C PERMIT IS NOT REQUIRED.
11. UNLESS DIRECTED OTHERWISE, REMOVE CLEARED AND GRUBBED MATERIAL FROM THE SITE AND DISPOSE AT AN APPROVED LOCATION.
12. UNLESS OTHERWISE NOTED, THE SAMPLING AND TESTING OF MATERIALS FOR USE ON THE JOBSITE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. ALL TESTING OF MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY A CERTIFIED TESTER. RESULTS OF THE TESTS SHALL BE SENT DIRECTLY TO THE PROJECT ENGINEER AS WELL AS THE CONTRACTOR, BY THE LABORATORY. LOCATION AND FREQUENCY OF TESTS SHALL BE DESIGNATED BY THE GENERAL CONTRACTOR.
13. ALL CUT AND FILL SLOPES SHALL BE MAXIMUM OF 2:1.

**GEOTECHNICAL NOTE**

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE PROJECT ENGINEER FOR REQUIRED REMEDIATION. THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT ENGINEER FOR REQUIRED SITE OBSERVATIONS AND TESTING OF ALL FILLS.

GENERAL NOTES  
NO SCALE

ENGINEER:



NO.	DATE	REVISION



PORT OF BROOKINGS  
REDEVELOPMENT

PREPARED FOR: (LOT 2800, MAP '360322DB')  
**PORT OF BROOKINGS**  
76330 Lower Harbor Rd., Brookings, OR 97415

Date: 04/04/2021  
Drawn By: INFRADRAFT  
Sheet No.: C-100  
File No.: 140



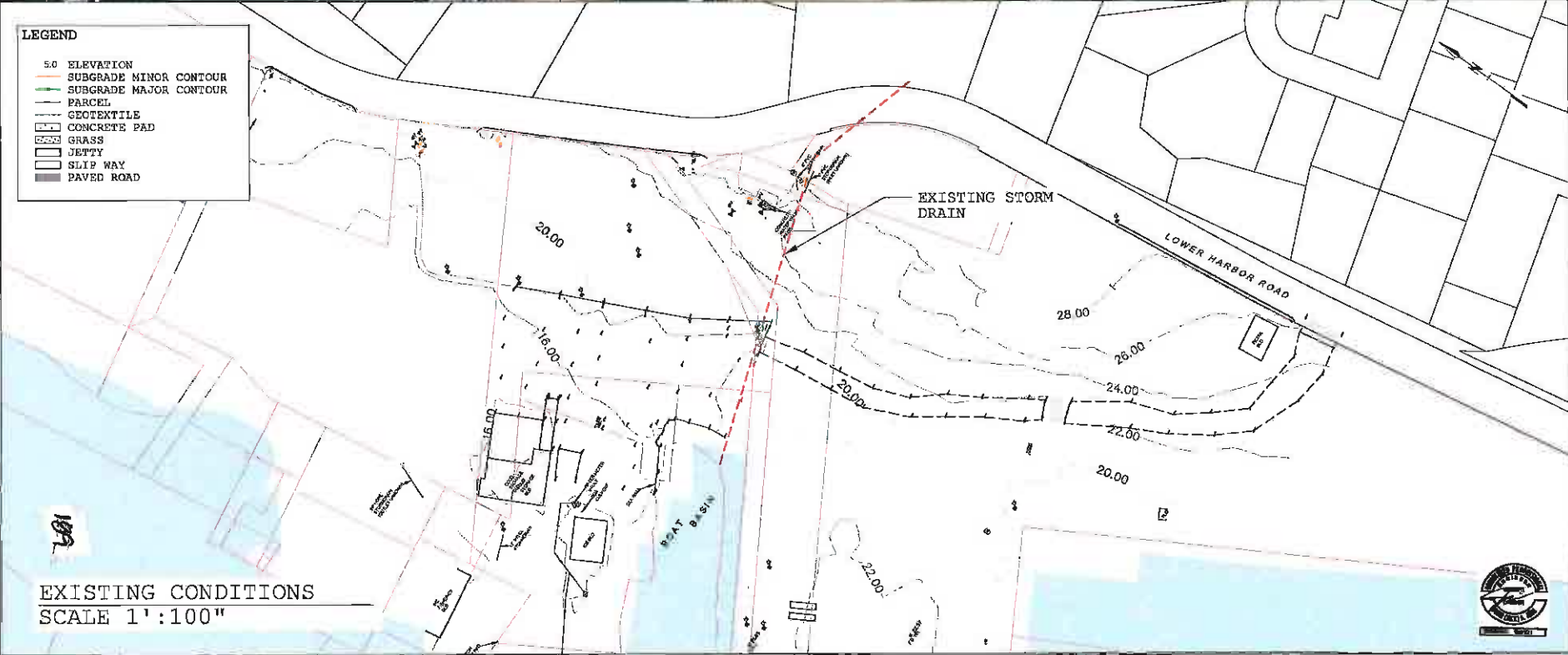


ENGINEER:



No.	DATE	REVISION	BY

- LEGEND**
- 5.0 ELEVATION
  - SUBGRADE MINOR CONTOUR
  - SUBGRADE MAJOR CONTOUR
  - PARCEL
  - GEOTEKSTILE
  - CONCRETE PAD
  - GRASS
  - JETTY
  - SLIP WAY
  - PAVED ROAD



EXISTING CONDITIONS  
SCALE 1':100"

PREPARED FOR: (LOT 2880, MAP 3009220B)

**PORT OF BROOKINGS**  
16330 Lower Harbor Rd, Brookings, OR 97415

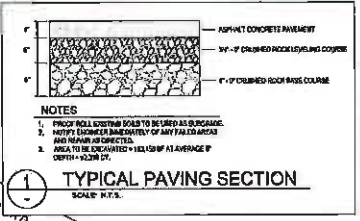


Date	04/04/2021
Drawn By	INFRADRAFT
Sheet No.	C-101
File No.	140





- LEGEND**
- 5.0 ELEVATION
  - SUBGRADE MINOR CONTOUR
  - SUBGRADE MAJOR CONTOUR
  - PARCEL
  - GEOTEXTILE
  - CONCRETE PAD
  - GRASS
  - JETTY
  - SLIP WAY
  - PAVED ROAD



**NOTES**

1. PAVEMENT SHALL BE USED AS SUBGRADE.
2. NOTIFY ENGINEER IMMEDIATELY OF ANY FAILURES AND REPAIRS REQUIRED.
3. AREA TO BE EXCAVATED SHALL BE AT AVERAGE 8\"/>

EXCAVATE SUBGRADE TO 1.5' BELOW EXISTING ROAD

EXCAVATE SUBGRADE TO ±1.5' BELOW TOP OF CONC AND TOP OF BANK ELEVATION

EXCAVATE SUBGRADE TO ±1.5' BELOW TOP OF CONC AND TOP OF BANK ELEVATION

GRADING PLAN  
SCALE 1' : 100"

140



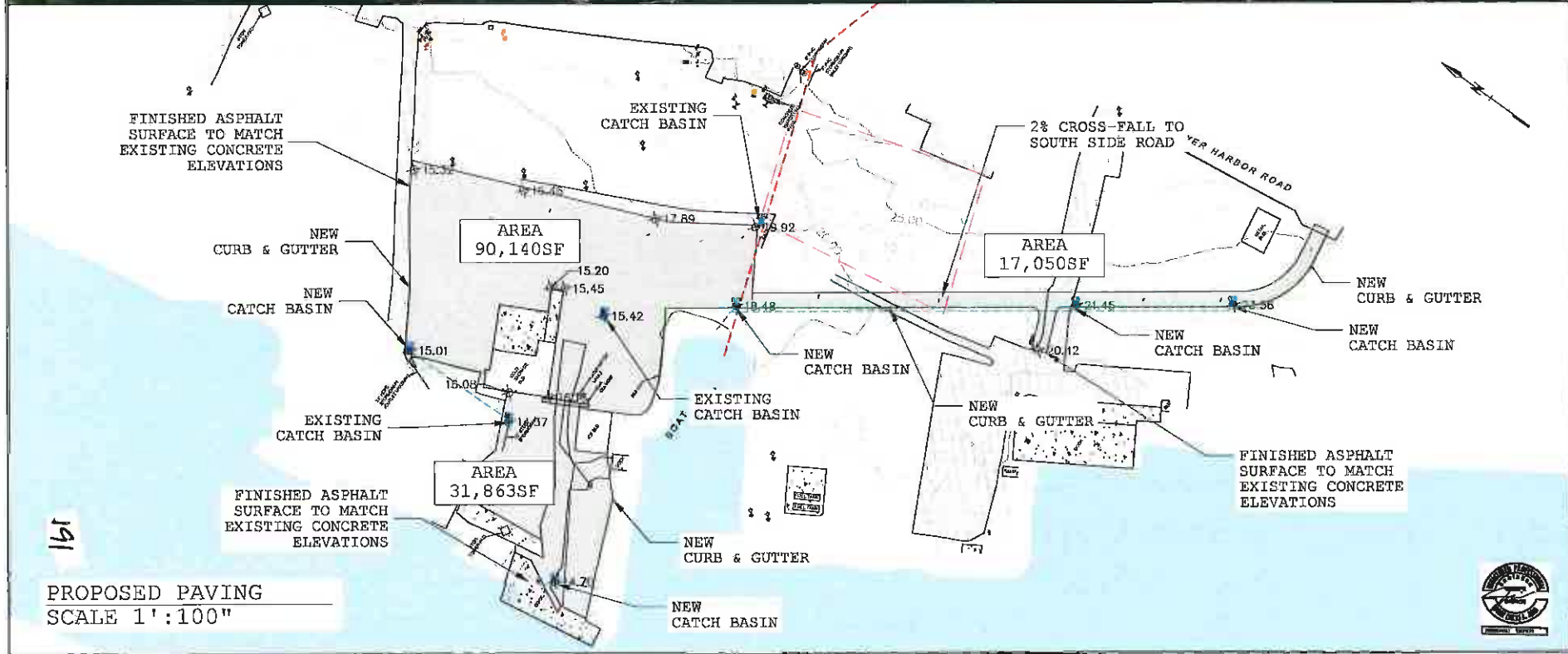
NO.	DATE	REVISION	BY



PREPARED FOR:  
**PORT OF BROOKINGS**  
16930 Lower Harbor Rd., Brookings, OR 97415

Date: 04/04/2021  
Drawn By: INFRADRAFT  
Sheet No.: C-102  
File No.: 140





191  
 PROPOSED PAVING  
 SCALE 1":100"



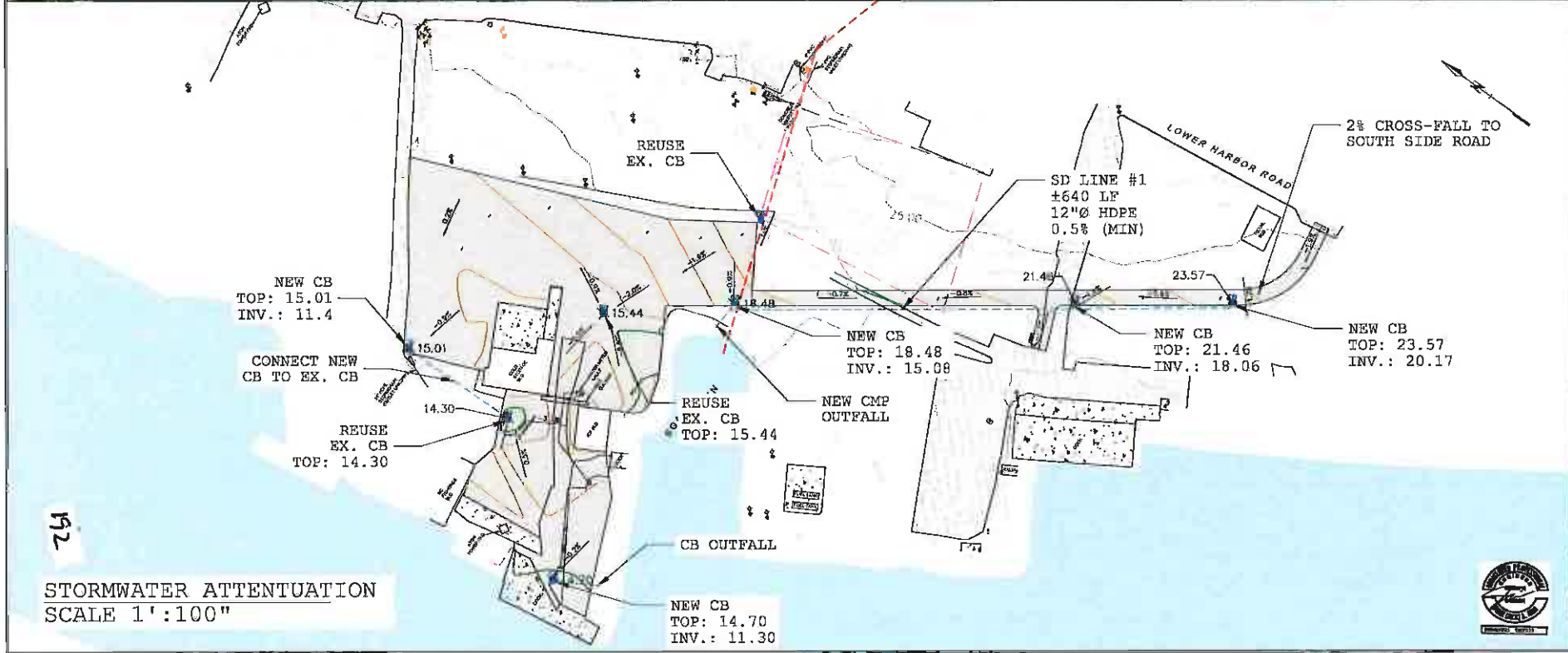
NO.	DATE	REVISION



PREPARED FOR: (LOT 2900, MAP 3608220B)  
**PORT OF BROOKINGS**  
 16330 Lower Harbor Rd, Brookings, OR 97415

Date: 04/04/2021  
 Drawn By: INFRADRAFT  
 Sheet No: C-103  
 File No: 140





192  
 STORMWATER ATTENUATION  
 SCALE 1':100"



NO.	DATE	REVISION

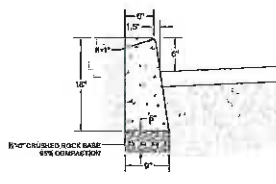


PREPARED FOR: (LOT 2500, MAP 380522DB)  
**PORT OF BROOKINGS**  
 16330 Lower Harbor Rd, Brookings, OR 97415

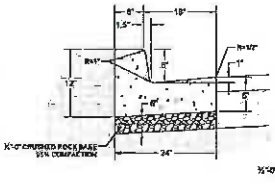
Date	04/04/2021
Drawn By	INFRA DRAFT
Sheet No.	C-104
File No.	140



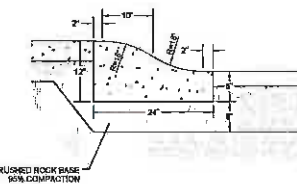




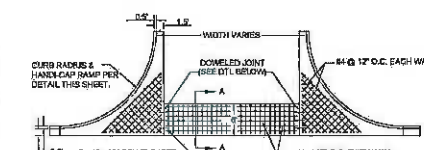
**301 VERTICAL CURB**  
SCALE: NTS



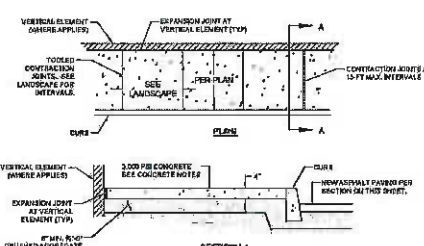
**302 CURB & GUTTER**  
SCALE: NTS



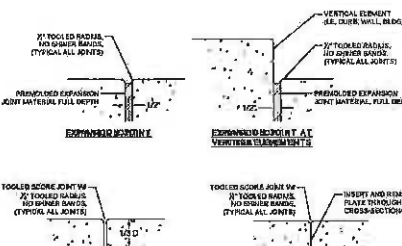
**303 ROLLED CURB**  
SCALE: NTS



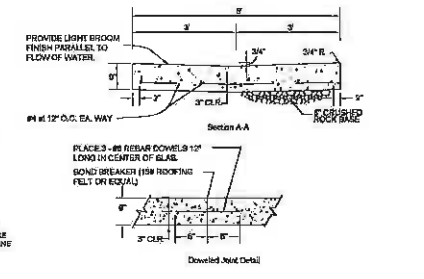
**304 CURB AND GUTTER PLAN VIEW**  
SCALE: NTS



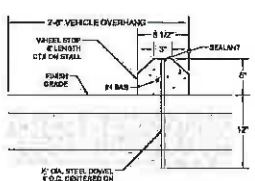
**305 CURB LINE CONCRETE SIDEWALK**  
SCALE: NTS



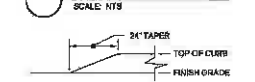
**306 CONCRETE CONTROL JOINTS**  
SCALE: NTS



**307 DRIVEWAY APRON WITH VALLEY GUTTER**  
SCALE: NTS



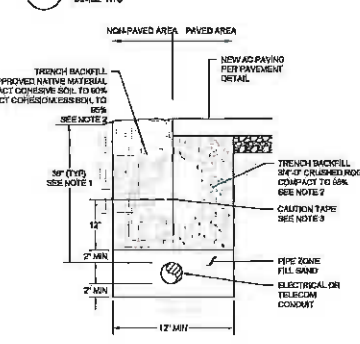
**308 WHEEL STOP**  
SCALE: NTS



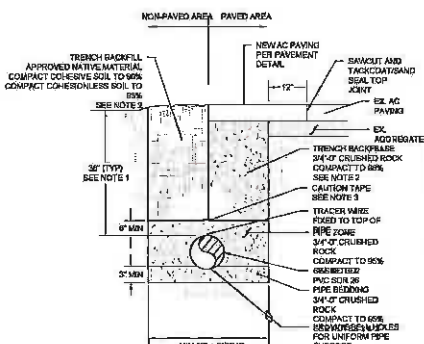
**309 CURB TAPER**  
SCALE: NTS

- NOTES**
1. COMPACT SUBGRADE AND AGGREGATE TO 95% OF MAXIMUM DRY DENSITY.
  2. FINISH SHALL BE MEDIUM BROOM PERPENDICULAR TO PEDESTRIAN TRAFFIC UNLESS OTHERWISE DIRECTED.
  3. CROSS SLOPE OF SIDEWALK SHALL BE 2% AWAY FROM THE BUILDING.
  4. SEE CONCRETE CONTROL JOINT DETAIL ON THIS SHEET.

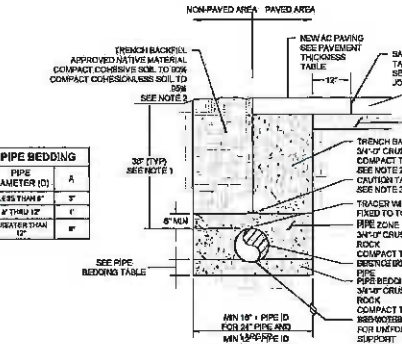
- NOTES**
1. CONCRETE TO BE COMMERCIAL GRADE CONCRETE (CGC) PER 2002 DODOT REGION AFWA SECTION 0440.00
  2. SUBGRADE AND BASE SHALL BE UNYIELDING AND FIRMLY COMPACTED.
  3. VALLEY GUTTER SHALL PASS A WATER TEST TO ASSURE FLOW.



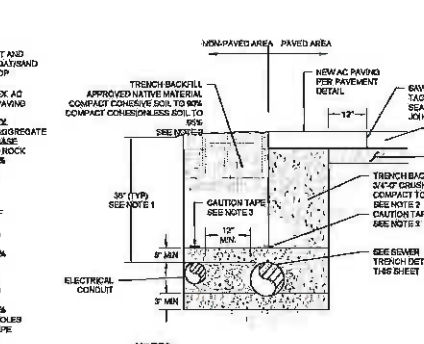
**583 CONDUIT TRENCH DETAIL**  
SCALE: NTS



**584 SEWER TRENCH DETAIL**  
SCALE: NTS



**585 WATER TRENCH DETAIL**  
SCALE: NTS



**586 JOINT TRENCH DETAIL**  
SCALE: NTS

- NOTES**
1. COVER OVER PIPE MAY VARY FROM 36" MIN TO 42" MAX UPON APPROVAL FROM ENGINEER.
  2. REQUIRE COMPACTION ACCORDING TO ASTM D 1557 MAXIMUM DRY DENSITY.
  3. REQUIRE COMPACTION ACCORDING TO ASTM D 1557 MAXIMUM DRY DENSITY.
  4. 3" WIDE GREEN POLYETHYLENE TAPE IMPRINTED "CAUTION: BURIED SEWER LINE" BELOW.

- NOTES**
1. COVER OVER PIPE MAY VARY FROM 36" MIN TO 42" MAX UPON APPROVAL FROM ENGINEER.
  2. REQUIRE COMPACTION ACCORDING TO ASTM D 1557 MAXIMUM DRY DENSITY.
  3. 3" WIDE GREEN POLYETHYLENE TAPE IMPRINTED "CAUTION: BURIED WATER LINE" BELOW.

- NOTES**
1. COVER OVER PIPE MAY VARY FROM 36" MIN TO 42" MAX UPON APPROVAL FROM ENGINEER.
  2. REQUIRE COMPACTION ACCORDING TO ASTM D 1557 MAXIMUM DRY DENSITY.
  3. ELECTRIC 6" WIDE RED POLYETHYLENE TAPE IMPRINTED "CAUTION: BURIED ELECTRIC LINE" BELOW.
  4. 3" WIDE GREEN POLYETHYLENE TAPE IMPRINTED "CAUTION: BURIED SEWER LINE" BELOW.

- NOTES**
1. COVER OVER PIPE MAY VARY FROM 24" MIN TO 42" MAX UPON APPROVAL FROM ENGINEER.
  2. REQUIRE COMPACTION ACCORDING TO ASTM D 1557 MAXIMUM DRY DENSITY.
  3. ELECTRIC 6" WIDE RED POLYETHYLENE TAPE IMPRINTED "CAUTION: BURIED ELECTRIC LINE" BELOW.
  4. 3" WIDE GREEN POLYETHYLENE TAPE IMPRINTED "CAUTION: COMMUNICATIONS LINE BURIED BELOW"

- NOTES**
1. COVER OVER PIPE MAY VARY FROM 36" MIN TO 42" MAX UPON APPROVAL FROM ENGINEER.
  2. REQUIRE COMPACTION ACCORDING TO ASTM D 1557 MAXIMUM DRY DENSITY.
  3. SEWER 3" WIDE GREEN POLYETHYLENE TAPE IMPRINTED "CAUTION: BURIED SEWER LINE" BELOW.

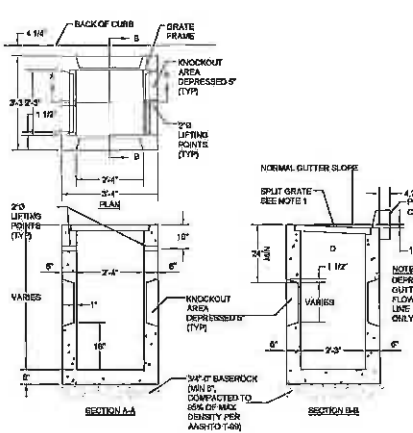
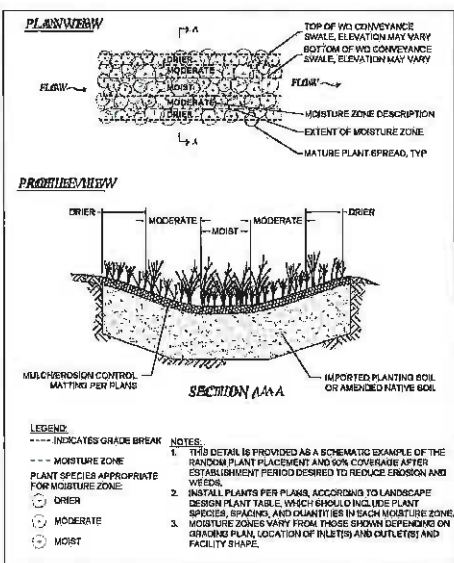
- NOTES**
1. COVER OVER PIPE MAY VARY FROM 36" MIN TO 42" MAX UPON APPROVAL FROM ENGINEER.
  2. REQUIRE COMPACTION ACCORDING TO ASTM D 1557 MAXIMUM DRY DENSITY.
  3. 3" WIDE GREEN POLYETHYLENE TAPE IMPRINTED "CAUTION: BURIED WATER LINE" BELOW.

- NOTES**
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  3. ELECTRIC 6" WIDE RED POLYETHYLENE TAPE IMPRINTED "CAUTION: BURIED ELECTRIC LINE" BELOW.
  4. 3" WIDE GREEN POLYETHYLENE TAPE IMPRINTED "CAUTION: BURIED SEWER LINE" BELOW.

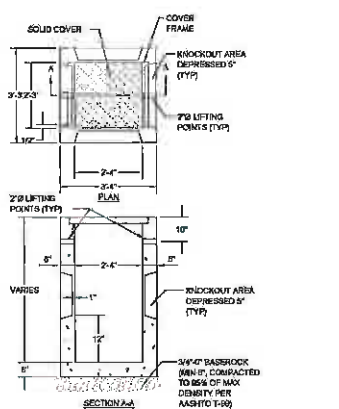
Created From: Jacksonville • Modified: OK  
 Produced by: EMC  
 Project: 2020 IMPROVEMENTS  
 Location: 9145 S.W. 14th St., Ft. Lauderdale, FL 33309  
 Phone: (954) 344-1100  
 Fax: (954) 344-1101  
 Website: www.emcgroup.com  
 Email: info@emcgroup.com  
 \* Engineering Solutions, LLC is a Member of EMC Group

**EMC**  
 Engineering Solutions, LLC

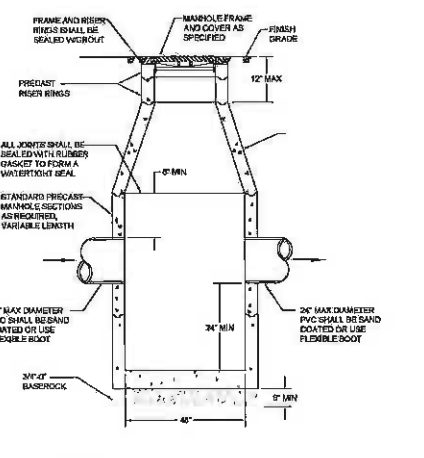
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 DATE: 08/01/20  
 JOB NO: 20-XXX  
**C105**  
 PROJECT DETAILS



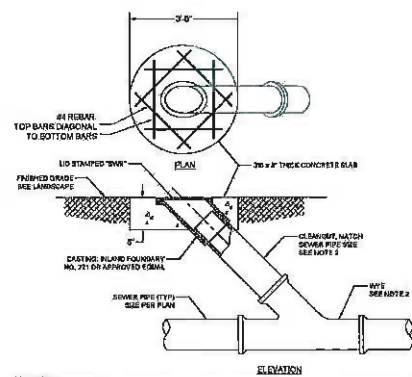
**2 CATCH BASIN**  
 SCALE: NTS



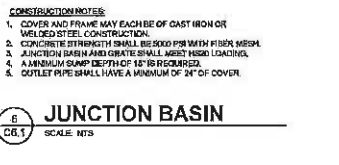
**3 LYNCH STYLE CATCH BASIN**  
 SCALE: NTS



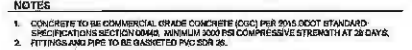
**4 CONTROL STRUCTURE MANHOLE**  
 SCALE: NTS (POWER 2 & 3)



**5 JUNCTION BASIN**  
 SCALE: NTS



**5 TYPICAL CLEANOUT**  
 SCALE: NTS



**Rogue Valley Stormwater Design Manual** | **Water Quality Conveyance Swale Planting Schematic** | **BMP 8.03 1 of 1 Scale: NTS**

**General Notes for Vegetated BMPs**

- End-user consultation of the facility level, repeated treatment area substrate shall be formed to suitable impede tree root construction (including maintenance and equipment movement).
- Soil and vegetation work to be done in a timely fashion to establish plantings before stormwater runoff to be done. Stormwater runoff facility. Plantings, vegetation work to be done in a timely fashion to establish plantings before stormwater runoff to be done. Stormwater runoff facility.
- Call for existing site conditions at a distance of 50 feet from the location of the BMP to be installed to determine existing site conditions in the field that may affect design and verify proper normal drain.
- On-site conditions within the site or adjacent areas of concern or adjacent soil types shall be noted.
- Placement of amending native or imported soil mix shall occur as follows:
  - Place soil mix to a minimum depth of 4" depth.
  - Soil mix depth shall be as noted.
  - Lightly compact soil mix, in a 4" water field (to ensure water) to achieve 90% compaction. Do not compact with heavy machinery or vibratory compaction.
  - Install energy storage below of suitable per approved plan.
- If any material has been removed or replaced, notify the surface to a depth of 4 inches to restore flatness.
- Install 1/2" (or 1" if specified) of crushed stone, if specified in approved plan.
- Landscaping plan that shall be in accordance with the current plan and standard detail A.2.2.0. Provide landscaping plan and standard detail A.2.2.0. Confirm existing landscape plan to be in accordance with the current plan and standard detail A.2.2.0.
- Install 1/2" (or 1" if specified) of crushed stone, if specified in approved plan. Use either 1/2" or 1" size aggregate, 1/2" or 1" size aggregate, 1/2" or 1" size aggregate.
- Provide a minimum free board over the top of the BMP. Ensure that the BMP does not have any slope.
- Soil above surface of BMP area must be permanently stabilized with rock and vegetation.

**AMENDED PLANTING SOIL MIX SPECIFICATIONS**

1. Amended planting soil mix shall be placed on the existing subgrade with the following characteristics:

- Applied between 4" and 12" thickness.
- Free of weed seeds, or contaminants, and hazardous materials.
- Applied evenly across the BMP by weight.
- Water holding capacity (WHC) at 150 psi shall be 0.05 to 0.15.
- Soil depth per cover.
- As determined in A.2.2.0.
- Customize the following provision for the mix:

Drainage Effectiveness	Percent Change
DP	+50%
SP	+25%
EP	+25%
LP	+25%
MP	+25%
OP	+25%

2. Import soil shall be brought to the existing subgrade, 10' above and 10' away from the BMP.

3. An on-site maintenance plan shall be developed and approved by the City of Rogue Valley. This plan shall include the following elements including: annual maintenance plan shall be provided for the site.

**COMPONENT SPECIFICATIONS**

All materials shall be installed and fully compacted, shall be crushed rock with a maximum size of 1/2 inch. A Technical Data Sheet from the US Compacting Council shall be provided for the material to be used.

**CONSTRUCTION NOTES:**

- Cover and frame may each be of cast iron or welded steel construction.
- Concrete strength shall be 3000 PSI WITH FIBER MESH.
- Junction basin and grate shall meet HSDD loading.
- A minimum slump depth of 1" is required.
- Outlet pipe shall have a minimum of 2" of cover.

**EMC**  
 Environmental Management Corporation, LLC  
 1400 E. Highway 101, Suite 100, Redding, CA 96001  
 530-228-0000 | www.emcenv.com

**PROJECT INFORMATION**  
 PROJECT: **PORT OF REDDING GROWER MANHOLE**  
 DATE: 09/01/20  
 JOB NO: 20-XXX

**2020 IMPROVEMENTS**

DRAWN BY: TAM  
 DATE: 09/01/20  
 JOB NO: 20-XXX

**C106**  
 PROJECT DETAILS

191



**GRADING NOTES**

1. PRIOR TO THE CONSTRUCTION OF EMBANKMENTS, THE CONTRACTOR SHALL EXCAVATE UNSUITABLE FOUNDATION MATERIAL, BASEMENTS, TRENCHES AND HOLE ENCOUNTERED DURING EMBANKMENT. LINES SHALL BE FILL WITH APPROVED MATERIAL. PRIOR TO LAYING THE CONTRACTOR SHALL BREAK CONCRETE FLOORS OF BASEMENTS AS DIRECTED. THE CONTRACTOR SHALL BREAK UP AND REMOVE THE GROUND SURFACE WITHIN EMBANKMENT. MATERIAL IS PLACED THE NATURAL GROUND UNDERLYING EMBANKMENTS SHALL BE COMPACTED TO THE DENSITY OF SPECIES FOR THE EMBANKMENT MATERIALS TO BE PLACED, AND TO THE DEPTH OF THE EMBANKMENT BY A MINIMUM OF 8 FEET.
2. EMBANKMENT CONSTRUCTION SHALL INCLUDE PREPARATION OF THE AREAS UPON WHICH EMBANKMENTS ARE PLACED. THE PLACEMENT AND CONSTRUCTION OF APPROVED EMBANKMENT MATERIALS AND FILLING OF HOLES, PITS AND OTHER DEPRESSIONS WITH THE SUPERVISOR.
3. THE CONTRACTOR SHALL PLACE EMBANKMENTS AND FILLS IN THE HORIZONTAL LAYERS OF 8 INCHES MAXIMUM THICKNESS AND COMPACT EACH LAYER TO THE DENSITY REQUIRED.
4. EMBANKMENT SHALL NOT BE CONSTRUCTED UNDER THE EMBANKMENT MATERIAL OR THE FOUNDATION ON WHICH THE EMBANKMENT WOULD BE PLACED IS PROVED.
5. IMMEDIATELY PRIOR TO COMPLETION OF THE EARTHWORK, THE CONTRACTOR SHALL CLEAN THE ENTIRE WORK AREA OF DEBRIS AND FOREIGN MATTER.
6. MAXIMUM PERCENTAGE OF COMPACTED MATERIAL SHALL BE DETERMINED BY ASTM D 1557.
7. THE CONTRACTOR SHALL COMPACT ALL EMBANKMENTS, FILLS AND BACKFILLS TO A MINIMUM IN PLACE DENSITY OF 95 PERCENT.
8. THE CONTRACTOR SHALL WATER THE MATERIALS TO PROVIDE OPTIMUM MOISTURE FOR COMPACTION OF EMBANKMENT AND BACKFILLS. EMBANKMENTS OR BACKFILL MATERIALS SHALL NOT BE PLACED BY FINAL PRODUCTION UNTIL MOISTURE IS SUFFICIENT OPTIMUM MOISTURE HAS BEEN MAINTAINED.
9. IF THE SPECIFIED COMPACTION IS NOT OBTAINED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER. THE CONTRACTOR MAY BE REQUIRED TO USE A MODIFIED COMPACTION PROCEDURE OR APPLY ADDITIONAL COMPACTIVE EFFORT. IF APPLICABLE MATERIALS MEETING THE SPECIFICATIONS CAN NOT BE OBTAINED TO THE REQUIRED DENSITY, THE CONTRACTOR SHALL BE REQUIRED TO USE AN ALTERNATE MATERIAL OR METHOD. THE ENGINEER MAY REQUIRE THE REQUIRED DENSITY OR OBJECT THE ALTERNATE MATERIALS USED, IN NO CASE SHALL OPERATING OPERATIONS PROCEED UNTIL THE CONTRACTOR IS ABLE TO COMPACT THE MATERIAL TO THE SATISFACTION OF THE ENGINEER.
10. USE 100% PERMIT IF REQUIRED.
11. UNLESS DIRECTED OTHERWISE, REMOVE, CLEANED AND GRINDING.
12. MATERIAL FROM THE SITE AND BEFORE AN APPROVED LOCAL. UNLESS OTHERWISE NOTED, THE SAMPLING AND TESTING OF MATERIALS FOR USE ON THE JOB SITE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. ALL TESTING OF MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY LICENSED TESTER. RESULTS OF THE TESTS SHALL BE SENT DIRECTLY TO THE PROJECT ENGINEER AS WELL AS THE CONTRACTOR. BY THE LABORATORY. LOCATION AND FREQUENCY OF TESTS SHALL BE DETERMINED BY THE GENERAL CONTRACTOR.
13. ALL DIRT AND FILL SLOPES SHALL BE MAINTAINED AT 2:1.

**GEOTECHNICAL NOTE**

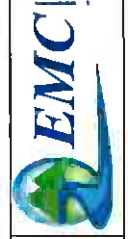
THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE PROJECT ENGINEER FOR REQUIRED FOUNDATION. THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT ENGINEER FOR REQUIRED SITE OBSERVATION AND TESTING OF ALL FILLS.

**SHEET INDEX**

- C1.0 COVER SHEET
- C2.0 EXISTING CONDITIONS
- C2.1 GRADING PLAN
- C2.2 FINISHED AND GRADE
- C3.0 PAVEMENT AREA
- C4.0 STORMWATER CONVEYANCE
- C5.0 NOT USED
- C6.0 PROJECT DETAILS
- C6.1 PROJECT DETAILS

DATE:	20 JUN 2003
DRAWN BY:	JG
CHECKED BY:	
DATE:	
DRAWN BY:	
CHECKED BY:	
DATE:	
DRAWN BY:	
CHECKED BY:	
DATE:	

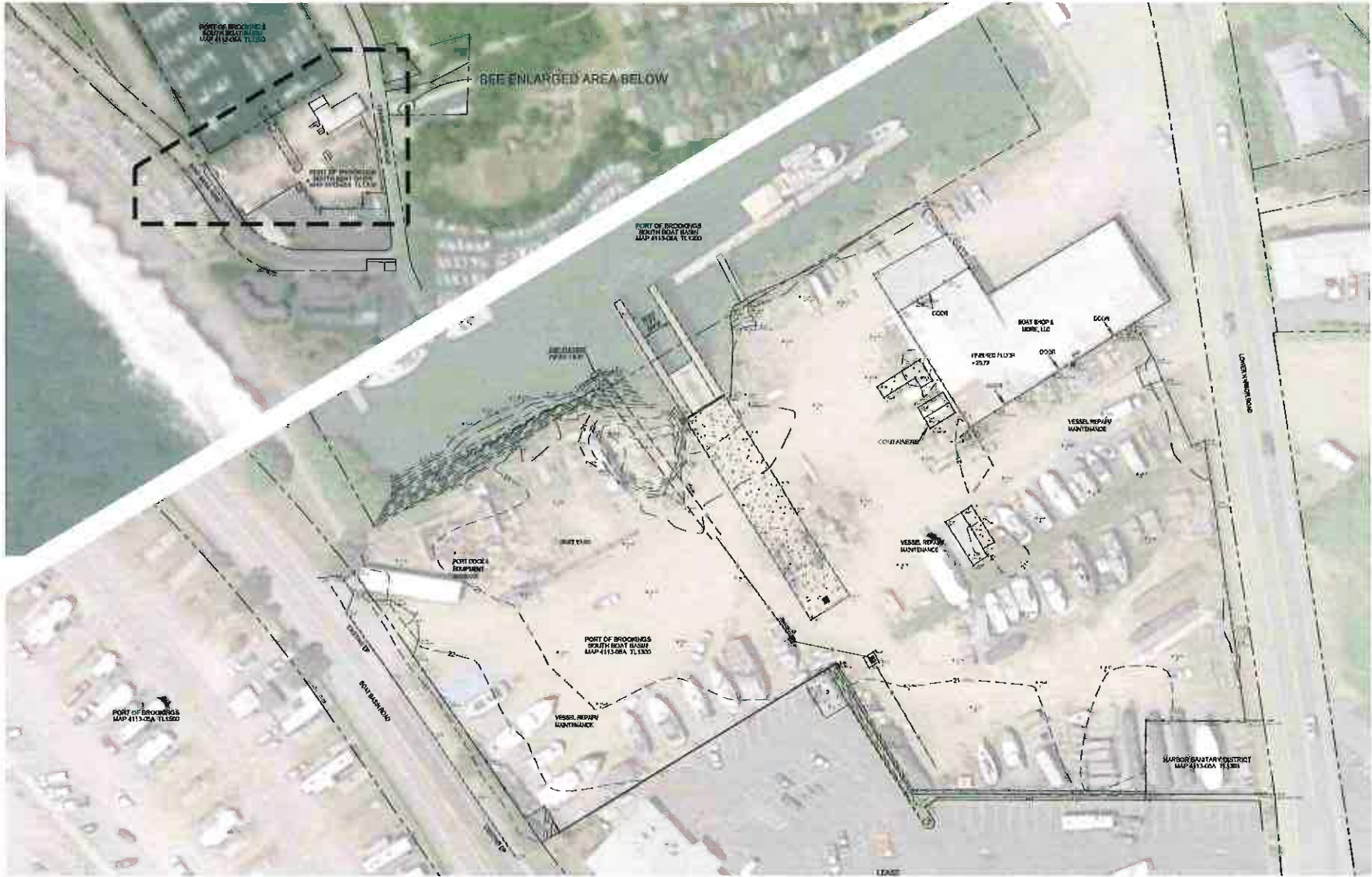
Create Files • Lockdown • Redshift, OR  
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 Phone: 541.338.3333 Fax: 541.338.3334  
 www.emc-engineers.com  
 EMC ENGINEERS, LLC



**PORT OF BROOKINGS HARBOR**  
 1000 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
**BOAT YARD PAVING**

DRAWN BY: JG  
 DATE: 20 JUN 2003  
 JOB No: 2  
 SHEET No:

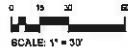
**C1.0**  
 COVER SHEET



**SURVEY BY**  
ROBERT E. ASSOCIATES AND SERVICE, INC.  
811 SPRUCE STREET  
BROOKINGS, OR 97415  
(541) 669-9102


**HORIZONTAL DATUM**  
OREGON COORDINATE REFERENCE SYSTEM (OREGON COORDINATE)  
ZONE 14 IS DEFINED BY OREGON ADHESION TO THE NAD 83  
734-06-005 TO 734-06-014. COORDINATES WERE  
CONVERTED TO THE OREGON REAL-TIME (ORT) REFERENCE  
NETWORK (ORN) BY REFERENCE TO THE BROWN EPOCH DATA  
INTERNATIONAL FEET, WITH A RELATIVE ACCURACY OF .00m.

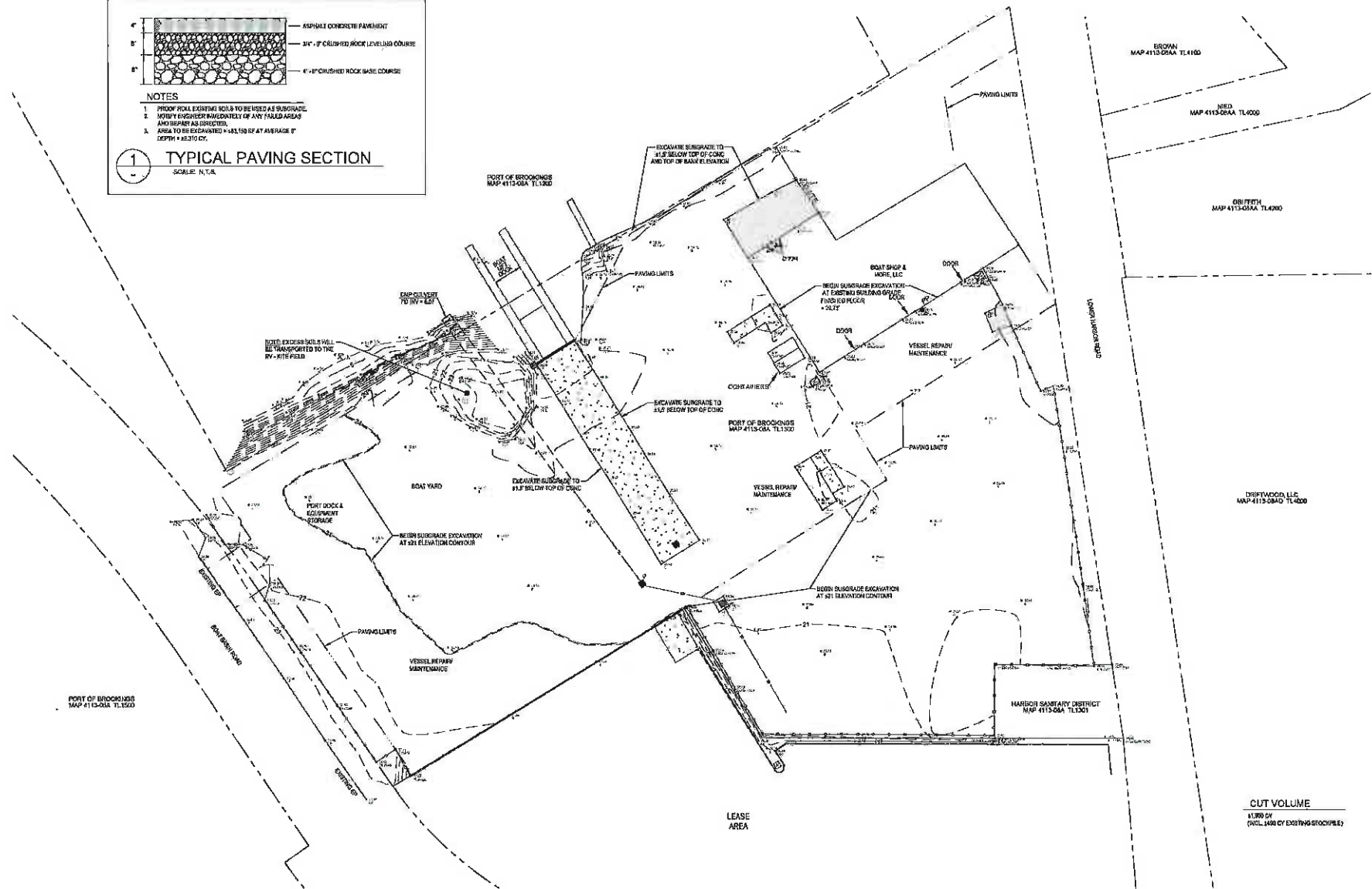
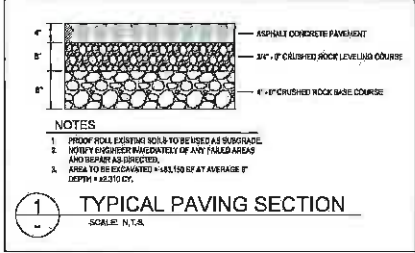
**VERTICAL DATUM**  
MEAN LOWER LOW WATER (MOLL) 1855-2001  
ENGINEERED FOR THIS SURVEY  
US ARMY CORPS OF ENGINEERS  
RELATIONSHIP - TIDE 2'  
ELEVATION - 3.03 FEET



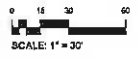
**EXISTING CONDITIONS**  
SCALE: 1" = 30' (2403)



 <p style="font-size: 8px; margin-top: 5px;">             Create, Plan, &amp; Constructible • Brookings, OR              217 COLLEGE WAY, BROOKINGS, OR 97415, 541-669-9102              1630 LOWER HARBOR BLVD., BROOKINGS, OR 97415              BROOKINGS, OR 97415 • 541-669-9102           </p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: 8px;">REVISIONS</td> <td style="width: 50px;">BY</td> <td style="width: 50px;">DATE</td> </tr> <tr> <td style="height: 40px;"> </td> <td> </td> <td> </td> </tr> </table>	REVISIONS	BY	DATE			
REVISIONS	BY	DATE					
<p style="font-size: 8px; margin: 0;"><b>PORT OF BROOKINGS HARBOR</b> 1630 LOWER HARBOR BLVD., BROOKINGS, OR 97415 <b>BOAT YARD PAVING</b></p>							
<p>DRAWN BY: JG DATE: 26 JAN 2021 JOB No: 2 SHEET No: <b>C2.0</b> EXISTING CONDITIONS</p>							



**CUT VOLUME**  
41,900 CY  
(INCL. 1400 CY EXISTING STOCKPILES)



**GRADING PLAN**  
SCALE: 1" = 30' (24/08)



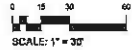
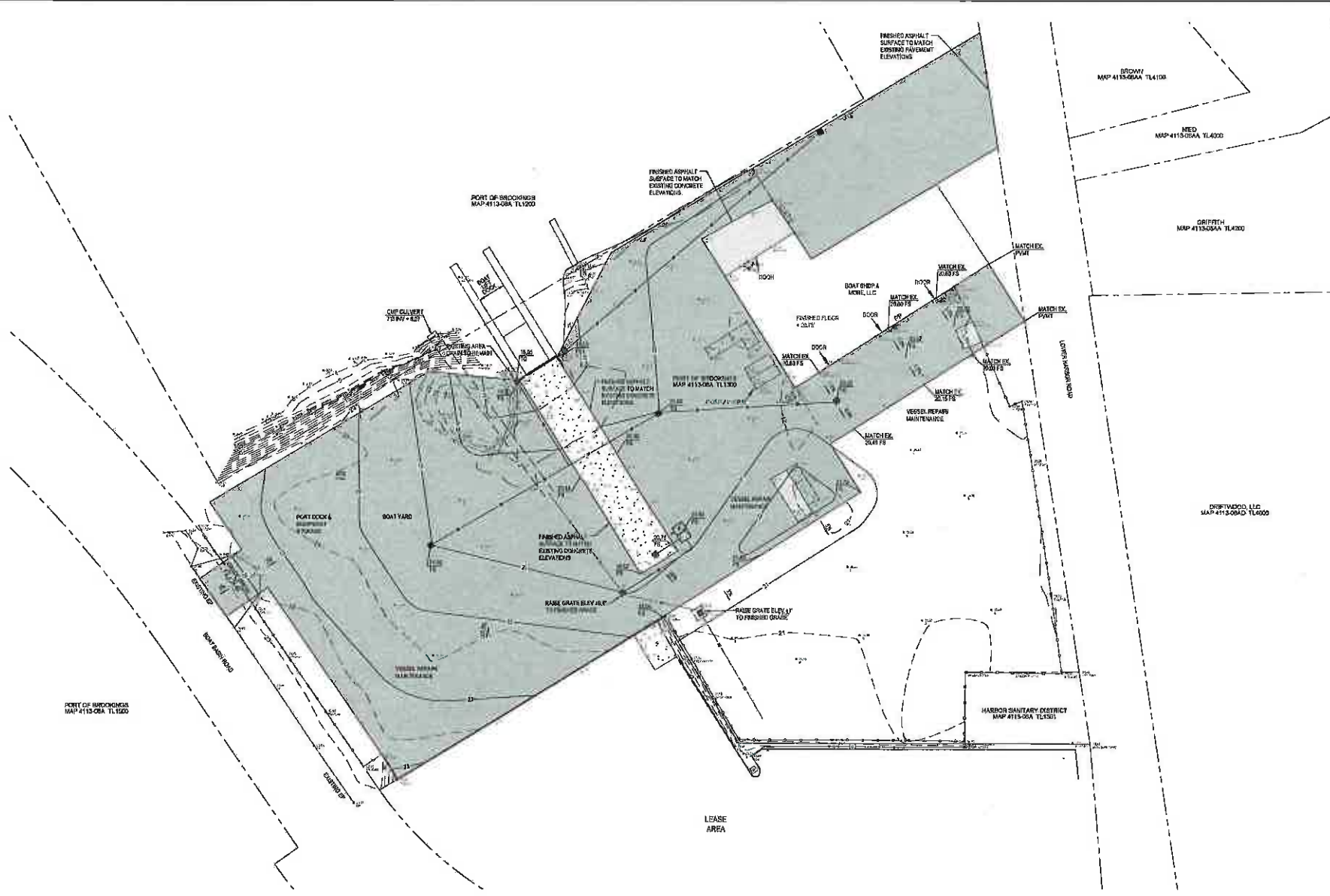
DATE	BY

Grant, Pass, Inc. Jacksonville • Modified, OR  
 12700 NE 147th Avenue, Suite 100, Grant, OR 97141  
 503-325-1111  
 www.grantpass.com



**PORT OF BROOKINGS HARBOR**  
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
**BOAT YARD PAVING**

DRAWN BY: JG  
 DATE: 28 JAN 2021  
 JOB No: #  
 SHEET No:  
**C2.1**  
 GRADING PLAN



FINISHED PAVING PLAN  
SCALE: 1" = 30' (24.38)

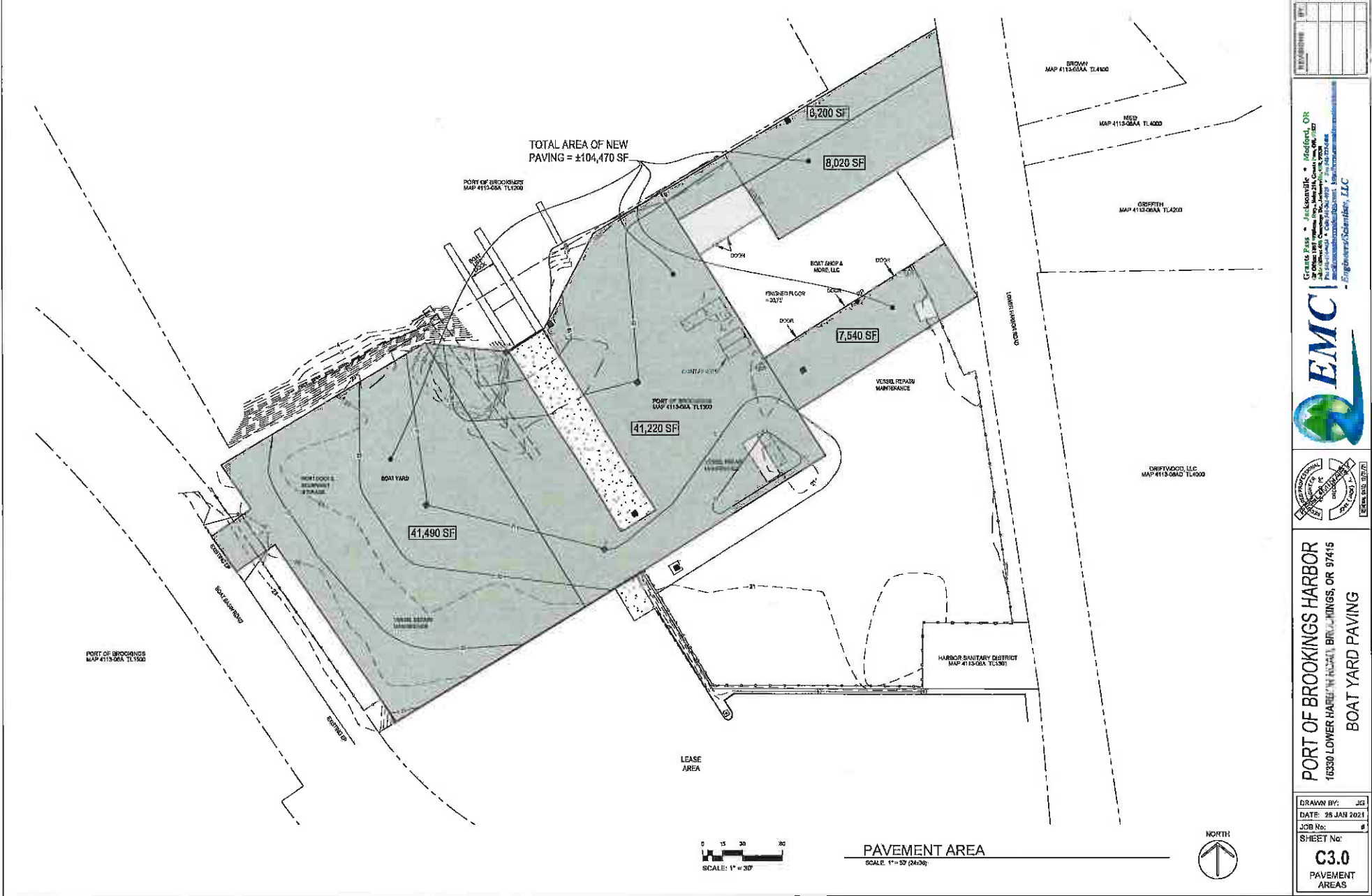


Cross Falls • Incleburnville • Medford, OR  
 Anir Engineering & Consulting, Inc. 200 N. Oregon Street, Medford, OR 97504  
[www.anirinc.com](http://www.anirinc.com)  
**Anir Engineers/Scientists, LLC**



**PORT OF BROOKINGS HARBOR**  
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
**BOAT YARD PAVING**

DRAWN BY: JGJ  
 DATE: 28 JAN 2021  
 JOB No:  
 SHEET No:  
**C2.2**  
 FINISHED PAVING PLAN



REVISION	BY	DATE

EMC

Engineers & Scientists, LLC

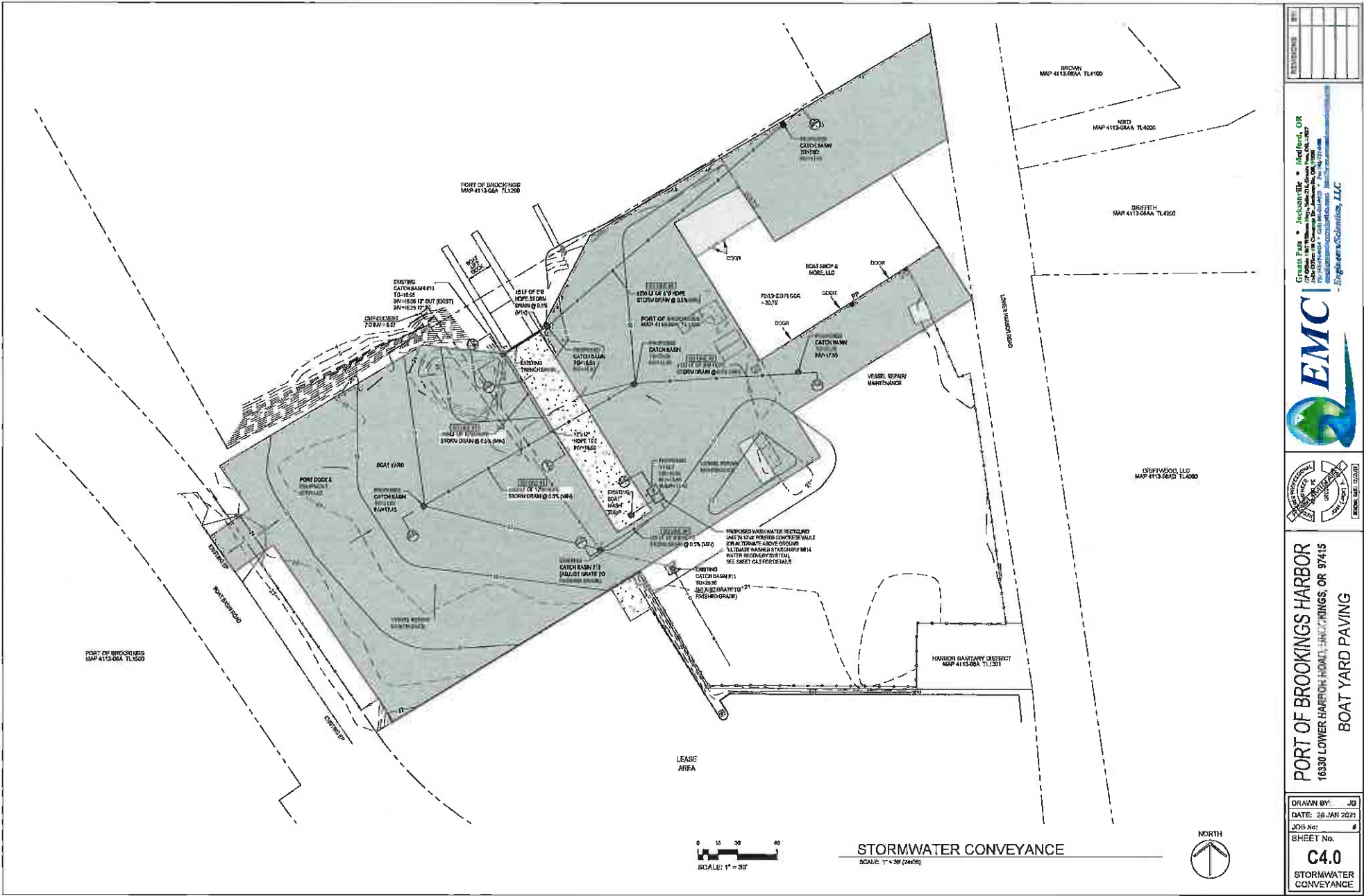
16350 LOWER HARBOUR AVENUE, BROOKINGS, OR 97415



**PORT OF BROOKINGS HARBOR**  
 16350 LOWER HARBOUR AVENUE, BROOKINGS, OR 97415  
**BOAT YARD PAVING**

DRAWN BY:	JES
DATE:	28 JAN 2021
JOB No:	
SHEET No:	
<b>C3.0</b>	<b>PAVEMENT AREAS</b>

667



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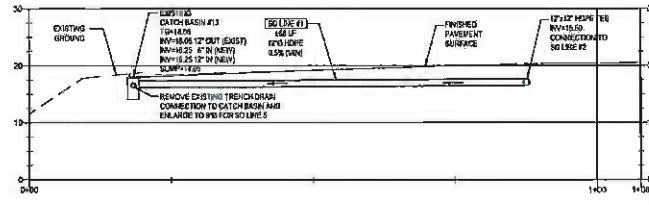


**PORT OF BROOKINGS HARBOR**  
 16330 LOWER HARPER DR. BROOKINGS, OR 97415  
**BOAT YARD PAVING**

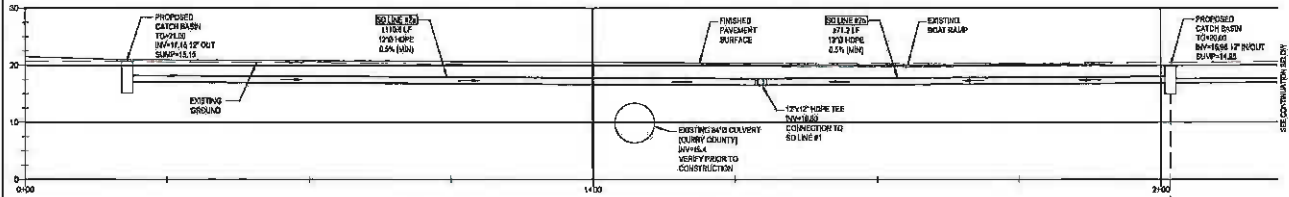
DRAWN BY: JG  
 DATE: 28 JAN 2021  
 JOB No: 4  
 SHEET No:  
**C4.0**  
 STORMWATER CONVEYANCE

200

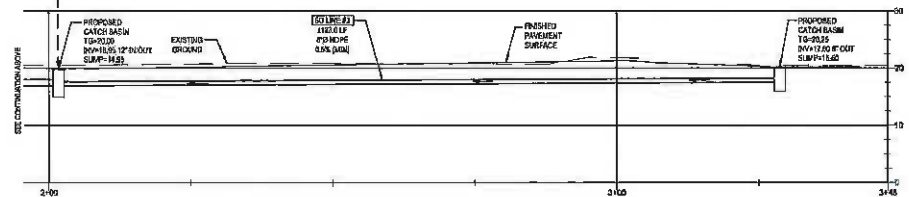




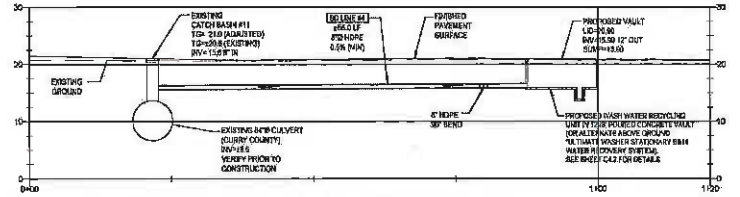
**A-A** STORMDRAIN LINE 1 - PROFILE "A - A"  
SCALE: 1" = 10' (1:12)



**B-B** STORMDRAIN LINE 2 - PROFILE "B - B"  
SCALE: 1" = 10' (1:12)



**B-B** STORMDRAIN LINE 3 - PROFILE "B - B"  
SCALE: 1" = 10' (1:12)



**C-C** STORMDRAIN LINE 4 - PROFILE "C - C"  
SCALE: 1" = 10' (1:12)



**D-D** STORMDRAIN LINE 5 - PROFILE "D - D"  
SCALE: 1" = 10' (1:12)

REVISION	DATE

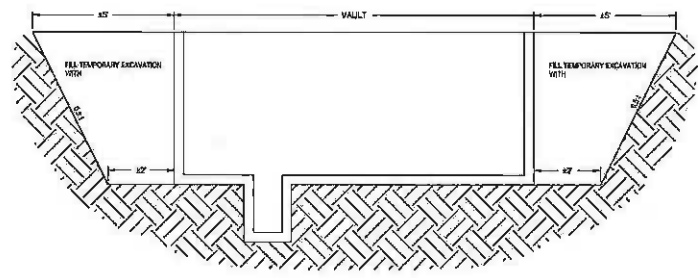
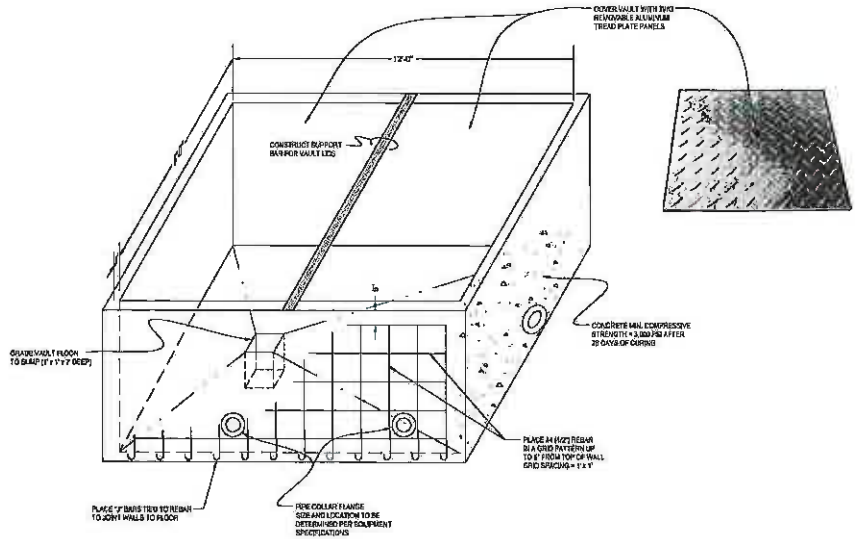
Chris P. ...  
16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
503.757.1234  
www.emcinc.com



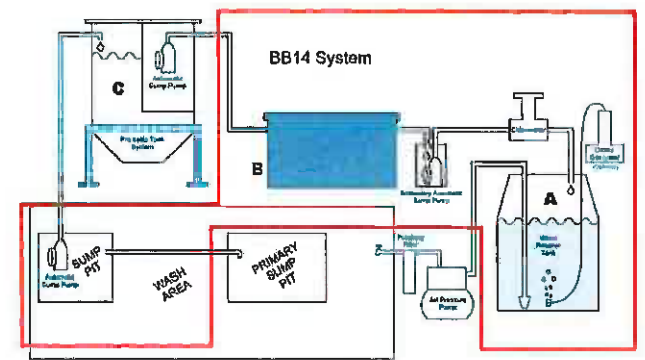
**PORT OF BROOKINGS HARBOR**  
16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
BOAT YARD PAVING

DRAWN BY: JO  
DATE: 26 JAN 2021  
JOB No: #  
SHEET No: #  
**C4.1**  
STORMDRAIN PROFILES

201



1 PRELIMINARY WASHWATER RECYCLING VAULT  
SCALE: N.T.S.



ULTIMATE WASHER STATIONARY BB14 WATER RECOVERY SYSTEM

- GENERATIONS**
- FILTERS ARE REACHABLE FROM OUTSIDE
  - 24" SP. ELECTRIC MOTOR, 110V, 9AHP
  - TWO 20" POLYPROPYLENE FILTERS
  - DEEPWAVE OR ANTIFRACTURE CHALLENGING PLATES
  - REVERSIBLE FILTER BACKWASH SYSTEM
  - 20" ABSORPTION SPHERULE MEDIA
  - WASHWATER COLLECTORS
  - POLYPROPYLENE INCLUDING
  - AUTO SHUT-OFF SYSTEM
  - 1 YEAR WARRANTY
  - 25 ADD 2" MESH FILTERS
  - WEIGHT: 300 LBS.
  - 200 GALLON RESERVE WATER TANK WITH 1" MANWAY ACCESS AND STAND
  - ULTRACLEAN OPERATOR
  - AUTOMATIC OPERATION
  - SERVICE TANK CHECK VALVE (1" USED)
  - SAFETY INSTRUCTION AND MAINTENANCE SCHEDULE



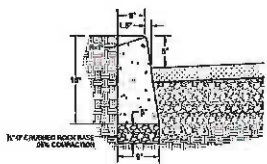
2 ALTERNATE ABOVE-GROUND WASHWATER RECYCLING UNIT  
SCALE: N.T.S.

PORT OF BROOKINGS HARBOR  
 16300 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
 BOAT YARD PAVING

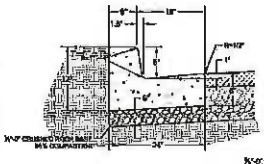
EMC  
 ENGINEERS & ARCHITECTS  
 1000 N. W. 10TH AVE., SUITE 100  
 MIAMI, FL 33136  
 PH: 305.575.1100  
 WWW.EMCENGINEERS.COM

DRAWN BY: JG  
 DATE: 26 JAN 2021  
 JOB No: #  
 SHEET No:  
**C4.2**  
 WASHWATER RECYCLING DETAILS

202



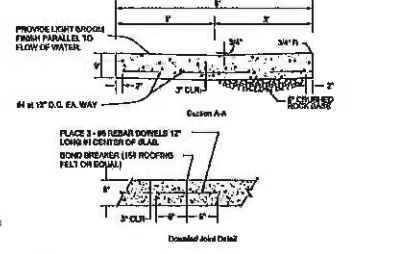
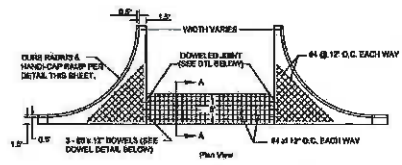
**301 VERTICAL CURB**  
SCALE: NTS



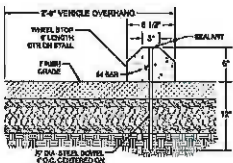
**302 CURB & GUTTER**  
SCALE: NTS



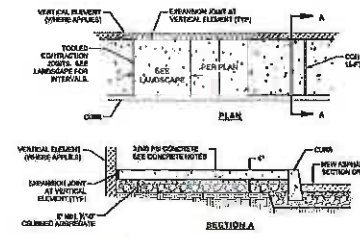
**303 ROLLED CURB**  
SCALE: NTS



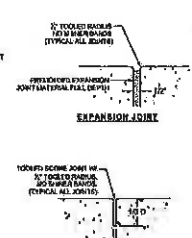
**NOTES**  
1. CONCRETE TO BE COMMERCIAL GRADE CONCRETE (2000) PER HAS (DO NOT USE CCR ASPHA SECTION 020405)  
2. SLOPEWAGE AND BASE SHALL BE UNPAVED AND FINELY COMPACTED  
3. VALLEY GUTTER SHALL PASS A WATER TEST TO ASSURE FLOW



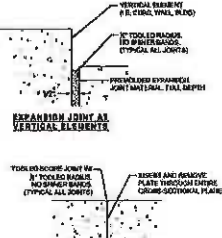
**304 WHEEL STOP**  
SCALE: NTS



**311 CURB LINE CONCRETE SIDEWALK**  
SCALE: NTS



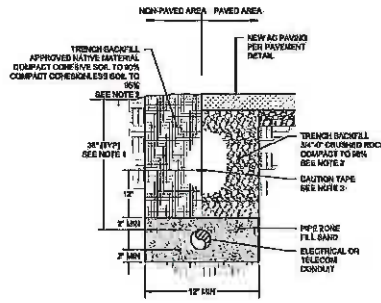
**309 CONCRETE CONTROL JOINTS**  
SCALE: NTS



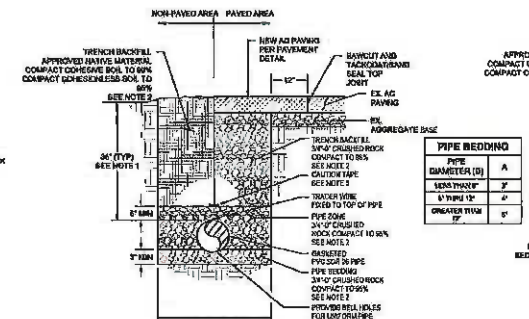
**310 EXPANSION JOINT AT VERTICAL ELEMENTS**  
SCALE: NTS

**307 DRIVEWAY APRON WITH VALLEY GUTTER**  
SCALE: NTS

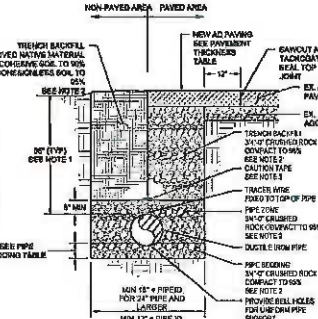
**305 CURB TAPER**  
SCALE: NTS



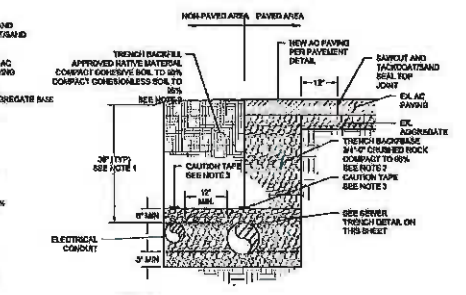
**583 CONDUIT TRENCH DETAIL**  
SCALE: NTS



**581 SEWER TRENCH DETAIL**  
SCALE: NTS



**580 WATER TRENCH DETAIL**  
SCALE: NTS



**584 JOINT TRENCH DETAIL**  
SCALE: NTS

PIPE BEDDING	
PIPE DIAMETER (D)	A
8\"/>	12\"/>
12\"/>	18\"/>
18\"/>	24\"/>
24\"/>	30\"/>

REVISIONS	BY	DATE

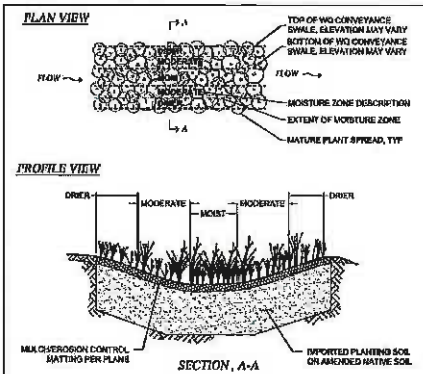
EMC  
 Environmental Management Corporation  
 17700 SW 28th Street, Suite 200, Portland, OR 97227  
 Phone: 503.288.8888 Fax: 503.288.8889  
 www.emcinc.com  
 Engineers & Scientists, LLC



PORT OF BROOKINGS HARBOR  
 16500 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
 BOAT YARD PAVING

DRAWN BY: JG  
 DATE: 28 JAN 2021  
 JOB No: #  
 SHEET No:  
**C6.0**  
 PROJECT DETAILS

203



**LEGEND:**  
 --- INDICATES GRADE BREAK  
 --- MOISTURE ZONE  
 ○ PLANT SPECIES PROPORTION  
 ○ MOISTURE ZONE  
 ○ DRAIN  
 ○ MODERATE  
 ○ MOIST

**NOTES:**  
 1. THIS DETAIL IS PROVIDED AS A SCHEMATIC EXAMPLE OF THE STANDARD PLANT PLACEMENT AND 90% COVERAGE AFTER ESTABLISHMENT PERIOD DESIGNED TO REDUCE SEDIMENT AND WEEDS.  
 2. INSTALL PLANTS PER PLANE, ACCORDING TO LANDSCAPE DESIGN PLANT TABLE, WHICH SHOULD INCLUDE PLANT SPECIES, SPACING, AND QUANTITIES IN EACH MOISTURE ZONE.  
 3. MOISTURE ZONES MAY VARY FROM THOSE SHOWN DEPENDING ON OCEANIC PLAN, LOCATION OF BAILEYS AND OUTLETS AND FACILITY SHAPE.

Rogus Valley Stormwater Design Manual  
 Water Quality Conveyance Swale Planting Schematic  
 BMP 8.03  
 1 of 3  
 Scale: NTS

**General Notes for Vegetated BMPs**

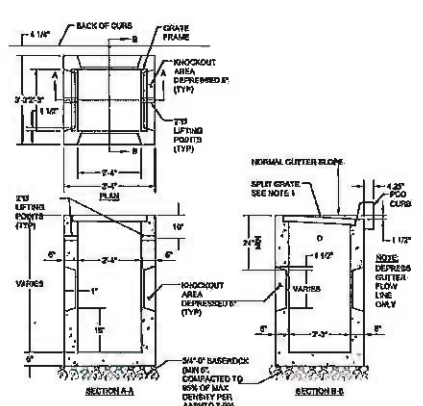
1. Planting construction shall be performed in accordance with applicable local, state and federal regulations.
2. Soil and vegetation shall be established prior to installing any structures.
3. All structures shall be constructed of concrete or masonry.
4. All structures shall be constructed of concrete or masonry.
5. All structures shall be constructed of concrete or masonry.
6. All structures shall be constructed of concrete or masonry.
7. All structures shall be constructed of concrete or masonry.
8. All structures shall be constructed of concrete or masonry.
9. All structures shall be constructed of concrete or masonry.
10. All structures shall be constructed of concrete or masonry.
11. All structures shall be constructed of concrete or masonry.

**APPROVED PLANTS FOR VEGETATED BMPs**

Plant Name	Plant Name
1. <i>Plant 1</i>	1. <i>Plant 1</i>
2. <i>Plant 2</i>	2. <i>Plant 2</i>
3. <i>Plant 3</i>	3. <i>Plant 3</i>
4. <i>Plant 4</i>	4. <i>Plant 4</i>
5. <i>Plant 5</i>	5. <i>Plant 5</i>
6. <i>Plant 6</i>	6. <i>Plant 6</i>
7. <i>Plant 7</i>	7. <i>Plant 7</i>
8. <i>Plant 8</i>	8. <i>Plant 8</i>
9. <i>Plant 9</i>	9. <i>Plant 9</i>
10. <i>Plant 10</i>	10. <i>Plant 10</i>

**CONSTRUCTION NOTES:**

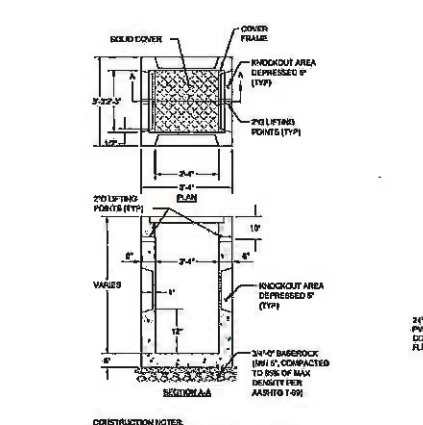
1. COVER AND FRAME MAY EACH BE OF CAST IRON OR WELDED STEEL CONSTRUCTION.
2. CONCRETE STRENGTH SHALL BE 3000 PSI WITH FIBER REINFORCING.
3. JUNCTION BASIN AND GRATE SHALL HAVE 10000 PSI STRENGTH.
4. A MINIMUM BURIED DEPTH OF 18" IS REQUIRED.
5. OUTLET PIPE SHALL HAVE A MINIMUM OF 24" OF COVER.



**NOTES:**

1. COVER AND FRAME MAY EACH BE OF CAST IRON OR WELDED STEEL CONSTRUCTION.
2. CONCRETE STRENGTH SHALL BE 3000 PSI WITH FIBER REINFORCING.
3. JUNCTION BASIN AND GRATE SHALL HAVE 10000 PSI STRENGTH.
4. A MINIMUM BURIED DEPTH OF 18" IS REQUIRED.
5. OUTLET PIPE SHALL HAVE A MINIMUM OF 24" OF COVER.

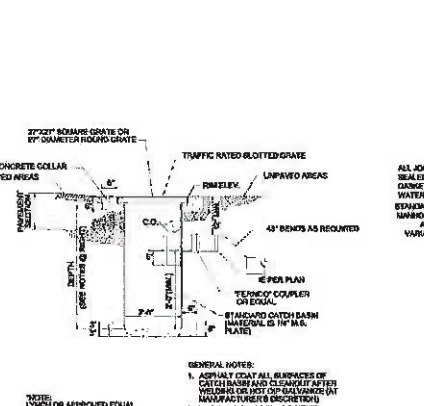
**2 CATCH BASIN**  
 1 of 1  
 SCALE: NTS



**CONSTRUCTION NOTES:**

1. COVER AND FRAME MAY EACH BE OF CAST IRON OR WELDED STEEL CONSTRUCTION.
2. CONCRETE STRENGTH SHALL BE 3000 PSI WITH FIBER REINFORCING.
3. JUNCTION BASIN AND GRATE SHALL HAVE 10000 PSI STRENGTH.
4. A MINIMUM BURIED DEPTH OF 18" IS REQUIRED.
5. OUTLET PIPE SHALL HAVE A MINIMUM OF 24" OF COVER.

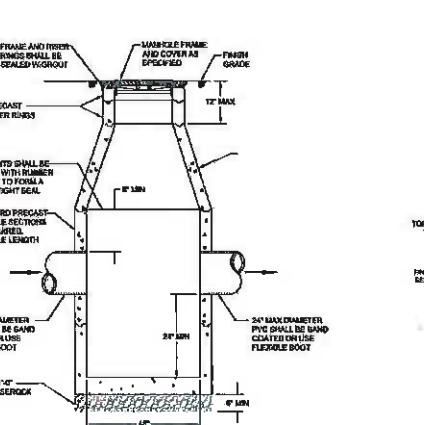
**6 JUNCTION BASIN**  
 1 of 1  
 SCALE: NTS



**GENERAL NOTES:**

1. JOINTS SHALL BE SEALED WITH RUBBER GASKET TO FORM A WATER-TIGHT SEAL.
2. STANDARD DEPTH: 18"
3. ALL WELDED STEEL CONSTRUCTION.
4. ALL WELDED STEEL THICKNESS.
5. OPENING ON BOTTOM OF STRUCTURE TO BE 12" DIA. OR EQUAL TO AREA IN OUTLET PIPE.
6. STANDARD DEPTH: 18"

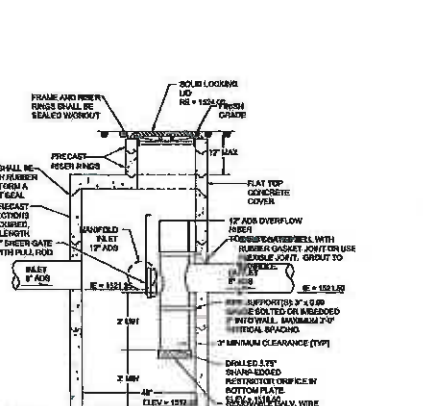
**3 LYNCH STYLE CATCH BASIN**  
 1 of 1  
 SCALE: NTS



**CONSTRUCTION NOTES:**

1. COVER AND FRAME MAY EACH BE OF CAST IRON OR WELDED STEEL CONSTRUCTION.
2. CONCRETE STRENGTH SHALL BE 3000 PSI WITH FIBER REINFORCING.
3. JUNCTION BASIN AND GRATE SHALL HAVE 10000 PSI STRENGTH.
4. A MINIMUM BURIED DEPTH OF 18" IS REQUIRED.
5. OUTLET PIPE SHALL HAVE A MINIMUM OF 24" OF COVER.

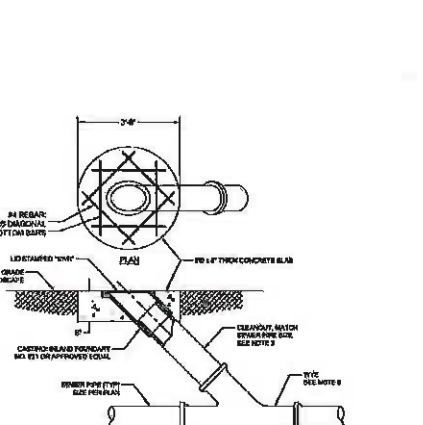
**4 CONTROL STRUCTURE MANHOLE**  
 1 of 1  
 SCALE: NTS (FIGS 2 & 3)



**CONSTRUCTION NOTES:**

1. COVER AND FRAME MAY EACH BE OF CAST IRON OR WELDED STEEL CONSTRUCTION.
2. CONCRETE STRENGTH SHALL BE 3000 PSI WITH FIBER REINFORCING.
3. JUNCTION BASIN AND GRATE SHALL HAVE 10000 PSI STRENGTH.
4. A MINIMUM BURIED DEPTH OF 18" IS REQUIRED.
5. OUTLET PIPE SHALL HAVE A MINIMUM OF 24" OF COVER.

**5 TYPICAL CLEANOUT**  
 1 of 1  
 SCALE: NTS

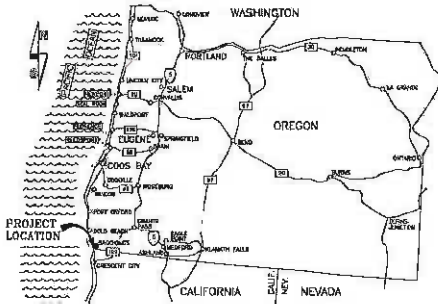


**CONSTRUCTION NOTES:**

1. COVER AND FRAME MAY EACH BE OF CAST IRON OR WELDED STEEL CONSTRUCTION.
2. CONCRETE STRENGTH SHALL BE 3000 PSI WITH FIBER REINFORCING.
3. JUNCTION BASIN AND GRATE SHALL HAVE 10000 PSI STRENGTH.
4. A MINIMUM BURIED DEPTH OF 18" IS REQUIRED.
5. OUTLET PIPE SHALL HAVE A MINIMUM OF 24" OF COVER.

**48\"/>**

EMC  
 Engineers & Scientists, LLC  
 16500 LOWER BROOKINGS ROAD, BROOKINGS, OR 97415  
 BOAT YARD PAVING  
 DRAWN BY: JG  
 DATE: 26 JAN 2021  
 JOB No: #  
 SHEET No:  
**C6.1**  
 PROJECT DETAILS



LOCATION MAP  
NOT TO SCALE

PORT OF  
BROOKINGS  
HARBOR



PORT OF BROOKINGS HARBOR

KITE FIELD RV PARK



KITE FIELD PARK EXTENTS



PROJECT OVERVIEW

SCALE: 1" = 300' (31.50) 1" = 400' (114.30)

LEGEND:

	EXIST. FIRE HYDRANT		FIRE HYDRANT
	EXIST. WATER VALVE		WATER METER
	EXIST. WATER OFF		BACKFLOW DEVICE
	EXIST. WATER METER		IRRIGATION WATER METER
	EXIST. HOSE BIB		AIR RELEASE VALVE
	EXIST. IRRIGATION VALVE		BLOWOFF DEVICE ASSEMBLY
	EXIST. AIR RELEASE VALVE		FIRE DEPARTMENT CONNECTION
	EXIST. STORM DRAIN MANHOLE		END PLUG
	EXIST. CLEANOUT		TEE
	EXIST. SANITARY SEWER MANHOLE		SANITARY SEWER CLEANOUT
	EXIST. MAN BLOCK		SANITARY SEWER MANHOLE
	EXIST. CURB RAMP		STORM DRAIN MANHOLE
	PARALLEL RAMP		STORM DRAIN MANHOLE
	HANDICAP PARKING SYMBOL		ATRIUM DRAIN / BUBBLER
	PARALLEL PARKING SYMBOL		CATCH BASIN INLET
	BICYCLE LANE SYMBOL		CURB INLET
	EXIST. SANITARY SEWER		STORM DRAIN CONTROL STRUCTURE
	EXIST. STORM DRAIN		ELECTRIC BOX
	EXIST. WATER		ELECTRIC TRANSFORMER
	EXIST. GAS		LIGHTS
	EXIST. ELECTRIC		CONTROL POINT
	EXIST. OVERHEAD POWER		MONUMENT
	EXIST. TELEPHONE		TRAFFIC SIGNAL LIGHT
	EXIST. FIBER OPTIC		SIGN (TRAFFIC, INFORMATION)
	EXIST. CURB AND GUTTER		BOLLARD
	EXIST. CENTERLINE		BICYCLE PARKING SPACE
	EXIST. RIGHT OF WAY		DECIDUOUS TREE
	EXIST. CONTOUR		CONIFER TREE
	PROPOSED CONTOUR		NEW CONCRETE
	EXIST. EDGE OF PAVEMENT		NEW GRAVEL PAVING
	CHAIN LINK FENCE		NEW IMC PAVING - STANDARD
	BARE WIRE FENCE		NEW IMC PAVING - HEAVY
	SANITARY SEWER		NEW LANDSCAPING
	STORM DRAIN		NEW RIP RAP
	WATER		
	OAK		
	ELECTRIC		
	CURB AND GUTTER		
	PROPOSED RIGHT OF WAY		
	FLOWLINE		
	PROPERTY LINE		

DRAWING REGISTER

Number	Title
C1.0	COVER SHEET
C1.1	EXISTING CONDITIONS
C2.0	SEQUENCING
C2.1	SEQUENCING
C2.2	SEQUENCING
C2.3	SEQUENCING DETAILS
C3.0	PRELIMINARY RV PARK DESIGN
C4.0	ROAD SECTIONS
C4.1	GENERAL NOTES
C5.0	ECS STANDARD DETAILS
C5.1	ECS GENERAL NOTES

PORT OF BROOKINGS HARBOR  
1000 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
KITE FIELD RV PARK

DRAWN BY: TAM  
DATE: 17/01/21  
JOB NO: 20-XXX

C1.0  
PROJECT  
DETAILS

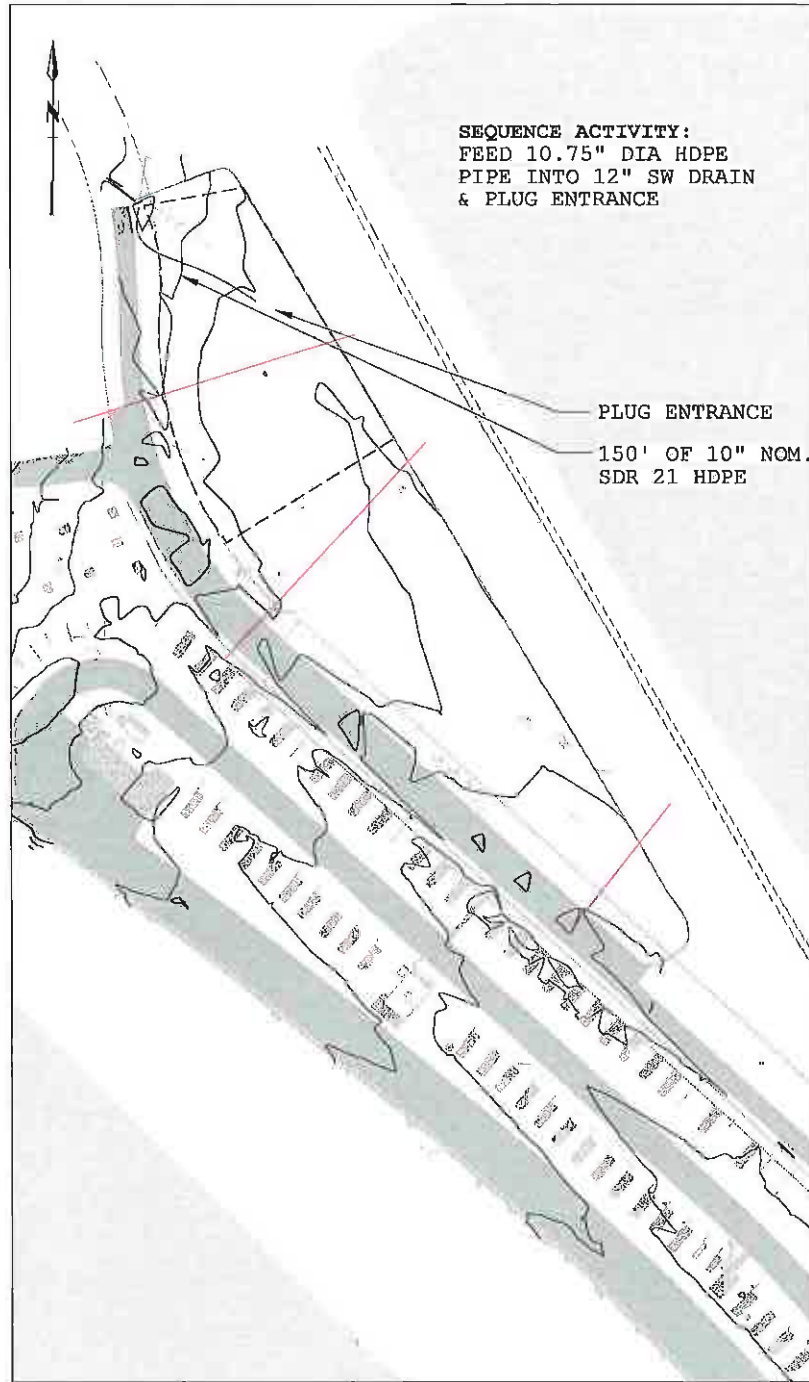
OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 800.001-010 THROUGH OAR 800.010-009. YOU MAY OBTAIN COPIES OF THESE RULES FROM THE CENTER BY CALLING 1-800-922-5264. IF YOU HAVE ANY QUESTIONS ABOUT THE RULES, YOU MAY CONTACT THE CENTER. YOU MUST NOTIFY THE CENTER AT LEAST TWO BUSINESS DAYS BEFORE COMMENCING AN EXCAVATION.

205





SEQUENCE #0: EXISTING CONDITIONS  
SCALE 1":80'



SEQUENCE #1: SEDIMENT & COLLECTION AREA  
SCALE 1":80'

ENGINEER:



**PORT OF BROOKINGS**  
16330 Lower Harbor Rd, Brookings, OR 97415  
KITE FIELD RV PARK  
FILE NUM: PB116

Date 17/01/2021

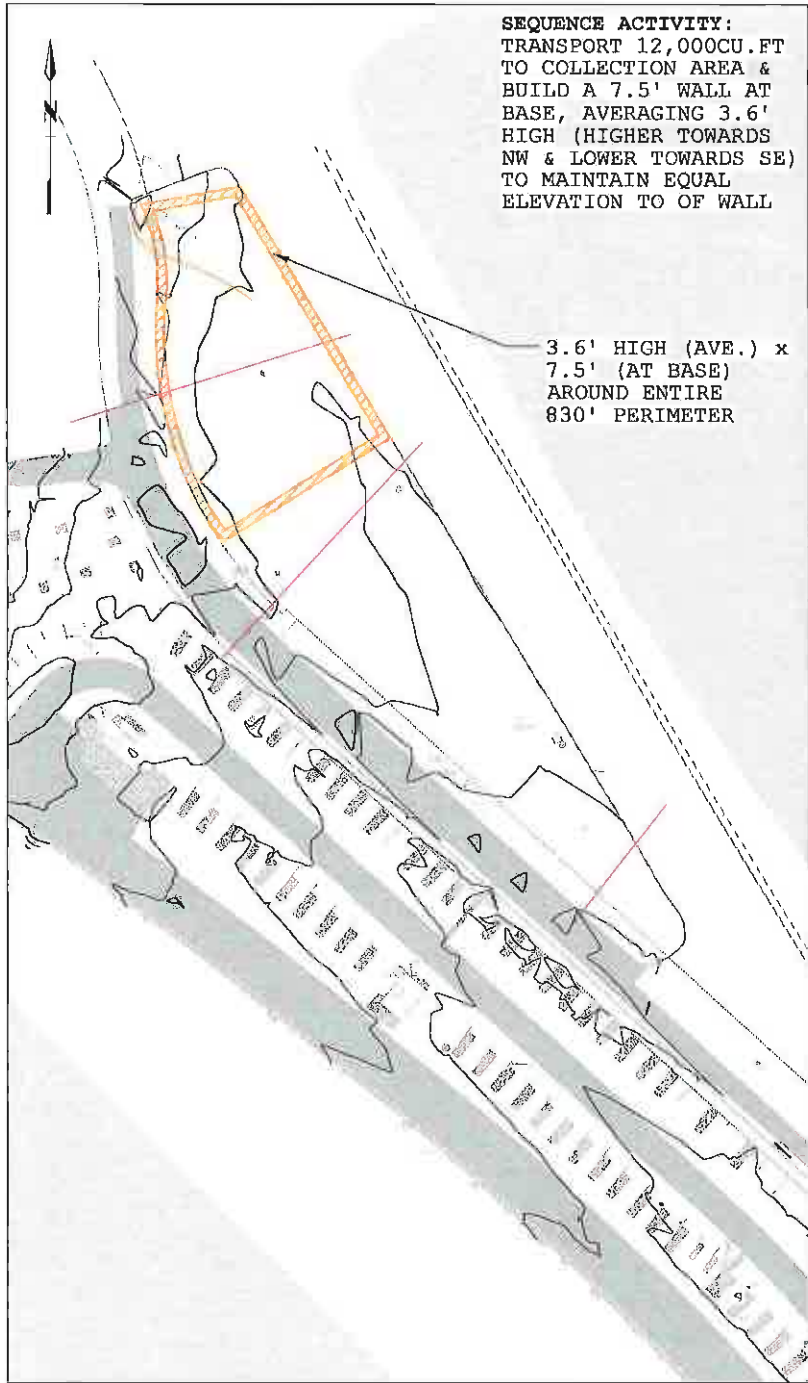
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Sheet No.

**C2.0**  
SEQUENCING

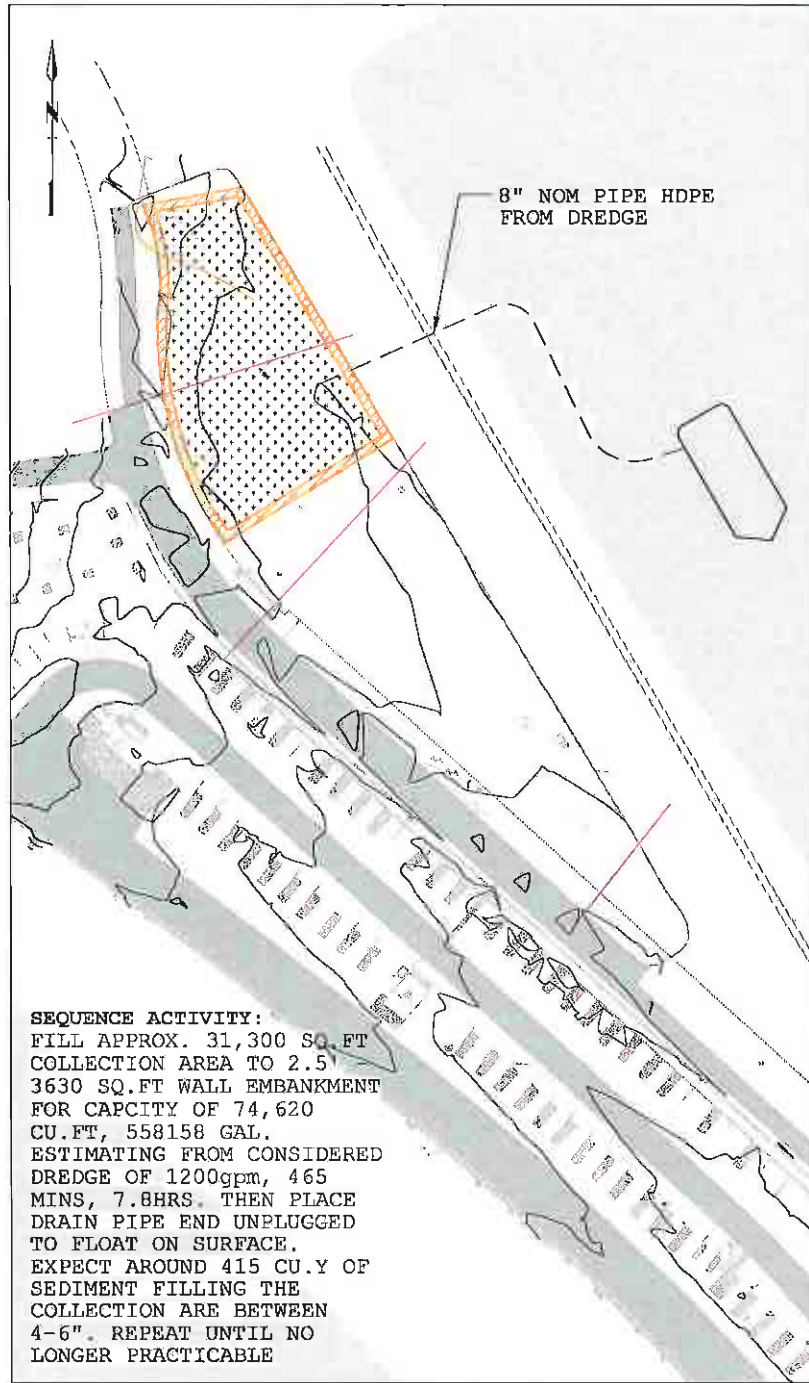
NO.	DATE	REVISION	BY



201



SEQUENCE #2: PERIMETER WALL  
 SCALE 1":80'



SEQUENCE #3: FILLING PART 1  
 SCALE 1":80'

208



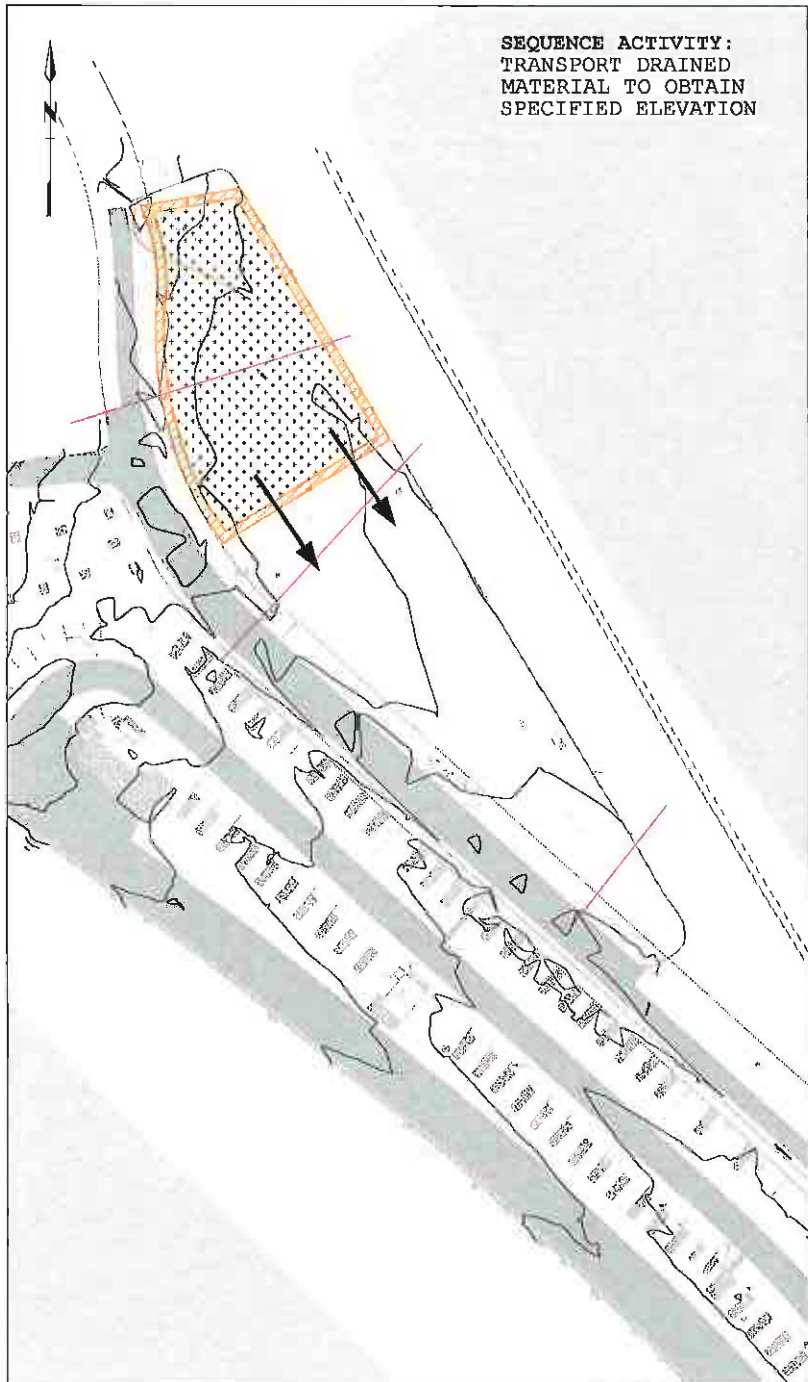
ENGINEER: **EMC** | **Engineers & Architects, LLC**

PORT OF BROOKINGS  
 16930 Lower Harbor Rd., Brookings, OH 47915  
 KITE FIELD RV PARK  
 FILE NUM: PB116

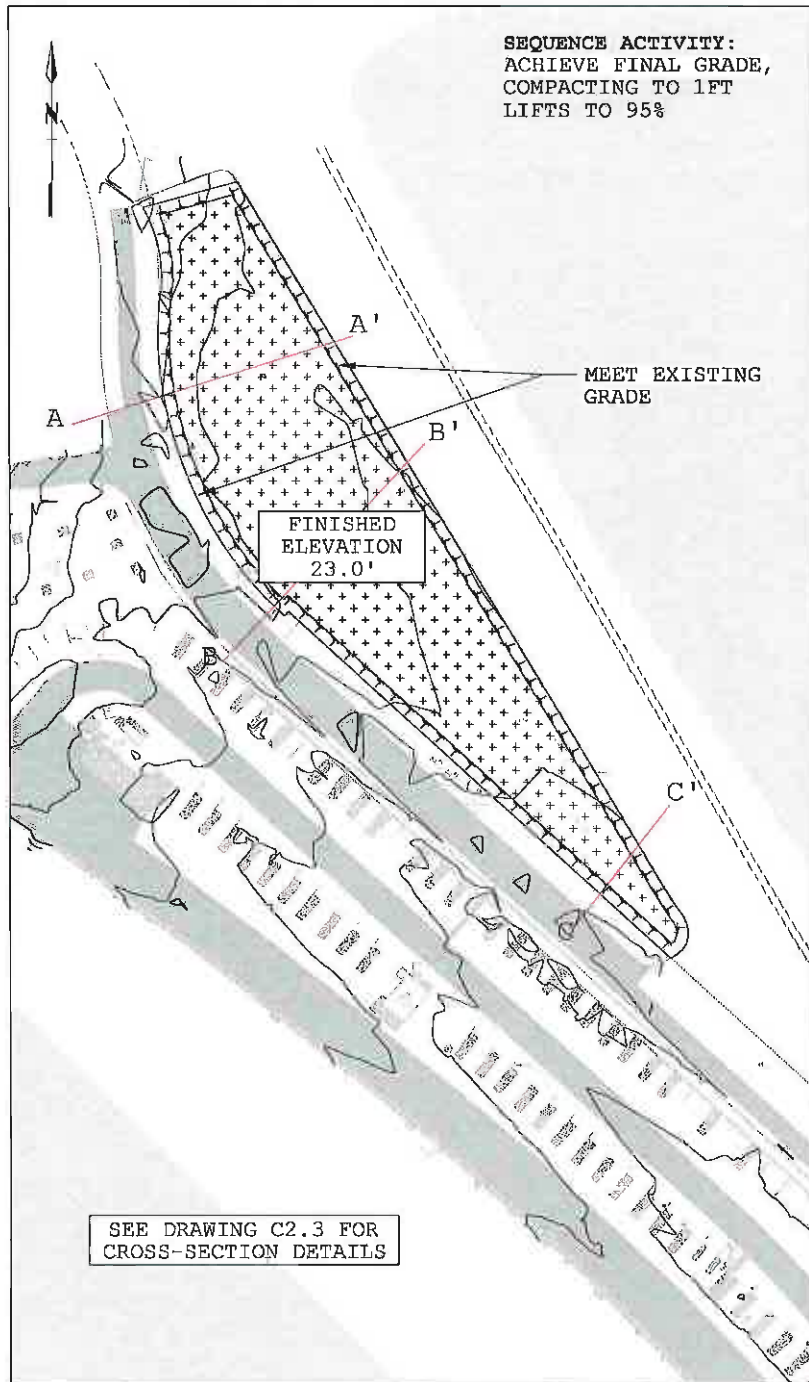
NO.	DATE	REVISION

Date: 17/01/2021  
 Drawn By: INFRADRAFT  
 Sheet No.: **C2.1**  
 SEQUENCING





SEQUENCE #4: TRANSPORT MATERIAL  
SCALE 1":80'



SEQUENCE #5: GRADING AND COMPACTION  
SCALE 1":80'

ENGINEER:



**PORT OF BROOKINGS**  
16930 Lower Harbor Rd., Brookings, OH 92415  
KITE FIELD RV PARK  
FILE NUM: PB116

Date  
17/01/2021

Drawn By  
INFRADRAFT  
Sheet No.

**C2.2**  
SEQUENCING



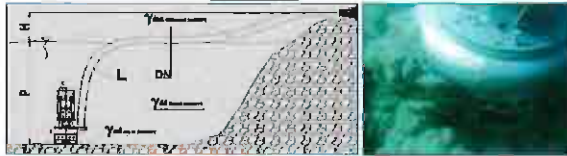
209

EMC-Engineers-Scientists, LLC-Oregon-US-oc1 28, 2020.XL.SX

Client: Jack Akin - EMC-Engineers-Scientists, LLC-Oregon-US  
 Date: Oct 28, 2020  
 Project: SHM feasibility  
 Author: Mjuron

**Mixture Details**

Solids concentration in the mixture  
 % by volume  %  
 corresponding to % by weight  %  
 Solid Particles Dimension  
 Particle Median Diameter   
 Liquid SG  kg/dm<sup>3</sup>  
 Solids SG  kg/dm<sup>3</sup>  
 Mixture Specific Gravity  kg/dm<sup>3</sup>  
 Fluid dynamic viscosity  Pa s

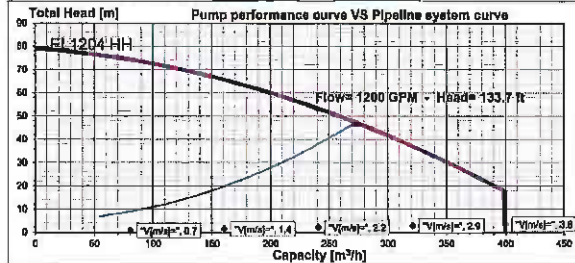


**Application Details**

Geodetic Height (Air) = H  m  ft  
 Geodetic Height (Water) = P  m  ft  
 Pipeline Total Length = L  m  ft  
 Pips Internal Diameter = DN  mm  inch  
 Total Mixture Capacity  m<sup>3</sup>/h  GPM

**System TDH at set capacity**

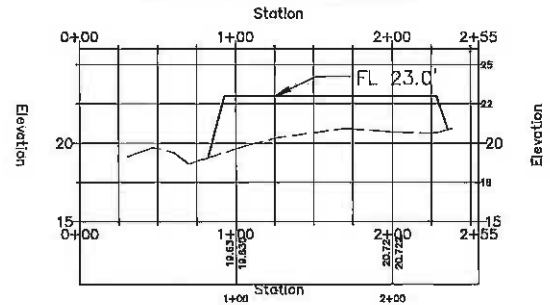
	SLURRY [m]	SLURRY [ft]	REQUIRED POWER
Friction loss along the pipeline	35.3	116.7	100 HP
Concentrated pressure drops	0.6	1.6	
Geodetic: [H+(m)(SG)-(SG)P]	5.0	16.6	PUMP POWER
Total Dynamic Head (TDH)	40.9	133.7	120 HP
Mixture velocity inside the pipeline	2.6	8.0	ft/s



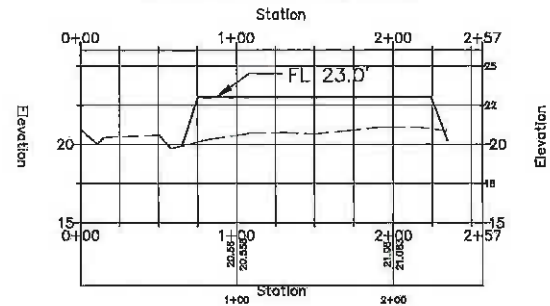
\* All the above values come from theoretical calculations. The solid concentration can vary from 10% to 50% pump capacity due to the kind of material to be pumped, the delivery distance, the working depth, the static head and to the ability of the operator to keep the pump's agitator in constant contact with the material to be pumped.  
 Max production with soft sand and all both well diluted what the efficiency decrease significantly with hard and plastic clay.

SEDIMENT DRAGFLOW SPECIFICATIONS

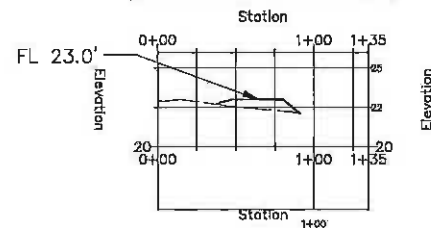
**SECTION AA PROFILE**



**SECTION BB PROFILE**



**SECTION CC PROFILE**



CROSS-SECTIONS NTS  
 SEE DRAWING C2.2



NO.	DATE	REVISION



**PORT OF BROOKINGS**  
 16330 Lower Harbor Rd, Brookings, OR 97415  
 KITE FIELD RV PARK  
 FILE NUM: PB116

Date: 17/01/2021

Drawn by: INFRADRAFT  
 Sheet No.:

**C2.3**  
 GENERAL NOTES





KITE FIELD RV PARK PRELIMINARY LAYOUT  
 SCALE 1":50"



**PORT OF BROOKINGS**

16250 Lower Harbor Rd., Brookings, OH 43715

KITE FIELD RV PARK  
 FILE NUM: FBI16



ENGINEER:



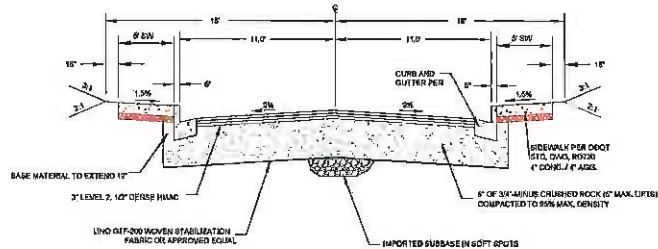
NO.	DATE	REVISION	BY

Date 17/01/2021

Drawn By INFRA DRAFT

Sheet No.

**C3.0**  
 PRELIM LAYOUT



### STREET SECTION

SCALE: NTS  
THE PORT OF BROOKINGS HARBOR STREET STANDARDS

#### NOTES

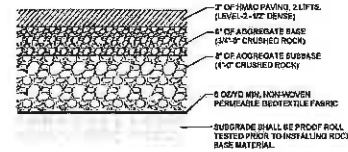
1. AGGREGATE BASE AND SUBBASE SHALL BE INSTALLED IN MINIMUM 6" LIFTS AND MECHANICALLY COMPACTED TO MINIMUM 98% OF THE MAXIMUM DENSITY IN ACCORDANCE WITH THE AASHTO T-99 METHOD.
2. JUST PRIOR TO PAVING, THE AGGREGATE BASE SHALL BE PROOF ROLLED, AGGREGATES THAT DO NOT PASS PROOF ROLL TESTING SHALL BE REMOVED, RECOMPACTED, AND TESTED AGAIN.
3. JUST PRIOR TO INSTALLING AGGREGATE BASE ROCK THE SUBGRADE SHALL BE PROOF ROLLED. SUBGRADE MATERIAL THAT DOES NOT PASS PROOF ROLL TESTING SHALL BE REMOVED AND ADDITIONAL CRUSHED ROCK INSTALLED.
4. PAVEMENT SECTION IS BASED ON THE ASSUMPTION THAT PAVEMENT CONSTRUCTION WILL BE ACCOMPLISHED DURING THE DRY SEASON.
5. PAVEMENTS SUBJECT TO CONSTRUCTION TRAFFIC MAY REQUIRE REPAIR.

### GENERAL NOTES

1. MAXIMUM CUT AND FILL SLOPES SHALL BE MAXIMUM OF 3:1 FOR FILL, AND MAXIMUM OF 2:1 FOR CUT.
2. FILL GRADE AND REMOVAL EMBANKMENT WHERE REQUIRED SHALL BE CONSTRUCTED FROM SELECT NATIVE SOILS.
3. IMPORTED SUBBASE (WHERE APPLICABLE) TO BE 4" OF CRUSHED ROCK.

### CONCRETE NOTES

1. PROVIDE A MINIMUM 1" TRANSITION SECTION OVER JOINTS OF DIFFERENT CROSS SECTIONS.
2. CONCRETE SHALL BE PLACED UNTIL FORMS HAVE BEEN INSPECTED AND APPROVED.
3. CONCRETE SHALL BE COMPACTED WHILE SETTING THE FOLLOWING CHARACTERISTICS: ENTRAINED AIR - 4.2% TO 7.0%, SLUMP - 5" JACKS OR LESS, COMPRESSIVE STRENGTH - MINIMUM 3,000 PSI AT 28 DAYS, TEMPERATURE - MINIMUM 50°F TO MAXIMUM 85°F.
4. ALL CONCRETE STRUCTURES REINFORCED WITH REBAR SHALL BE VIBRATED TO REMOVE VOID.
5. SURFACE SHALL HAVE A FINISHED TEXTURE THAT WILL NOT BE SLICK WHEN WET (SEMI RICH) FRESH CURING COMPOUND MAY BE APPLIED IMMEDIATELY AFTER CONCRETE IS FINISHED. WHITE PIGMENT RECOMMENDED. CLEAN ACCEPTABLE.
6. AN EXPANSION JOINT SHALL BE USED ON ALL EDGES AND JOINTS.
7. PROVIDE CONTRACTION JOINTS AT 15' INTERVALS AND "DUMBY" TOoled JOINTS AT 8' INTERVALS ON CURBS, SIDEWALKS AND APPROVED CONSTRUCTION JOINTS. DEPTHS SHALL BE AT MINIMUM 1/2" DEEP ON ONE-TWO THICKNESS OF THE CONCRETE.
8. PROVIDE EXPANSION JOINTS OPPOSITE SPLITTING EXPANSION JOINTS IN ADJUTTING CONCRETE. AT EACH POINT OF TRANSITION IN THE STRUCTURE ALONGSIDE, BETWEEN DRIVEWAYS AND CONCRETE PAVEMENT, AROUND POLES, POSTS, BOXES AND OTHER FEATURES WHICH PROTRUDE THROUGH OR ABOVE THE SURFACE, AT ALL CORNERS AND EDGES, AT MAXIMUM OF 100' INTERVALS. EXPANSION JOINT MATERIAL SHALL BE OF THE RETURNWARD PERFORMED FILLER TYPE NOT LESS THAN 3/4" THICK, PLACED FLUSH OR NO MORE THAN 1/8" BELOW THE CONCRETE SURFACE.
9. STRAIGHT LINE EDGES SHALL NOT VARY MORE THAN 1/2" UNDER A TWELVE-FOOT STRAIGHT EDGE.
10. CURB AND PROTECT CONCRETE AFTER PAVING AND FINISHING. KEEP STRUCK CURBS FREE FROM CONTACT. 8" HIGH AND PUBLIC TRAFFIC FOR AT LEAST SEVEN DAYS OR LONGER AS DIRECTED. MEAS TO EXPEDITE CURING MAY BE USED WITH APPROVAL OF CITY ENGINEER.
11. CONCRETE SHALL BE REMOVED TO THE NEAREST CONSTRUCTION JOINT, JOINT OR CRACK WITHIN 4' OF THE REPLACEMENT AREA. CONCRETE SHALL BE SAWCUT WITH A SHOULDER JOINT JOINT FINISHED.
12. EXISTING MATERIAL SHALL BE REMOVED/REPLACED ENTIRE CURB SECTION TO A MINIMUM 12" WIDTH UNLESS APPROVED BY ENGINEER OF RECORD.

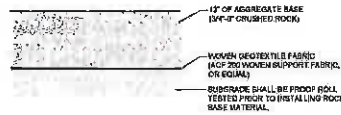


#### NOTES

1. AGGREGATE BASE AND SUBBASE SHALL BE INSTALLED IN MINIMUM 6" LIFTS AND MECHANICALLY COMPACTED TO MINIMUM 98% OF THE MAXIMUM DENSITY IN ACCORDANCE WITH THE AASHTO T-99 METHOD.
2. JUST PRIOR TO PAVING, THE AGGREGATE BASE SHALL BE PROOF ROLLED. AGGREGATES THAT DO NOT PASS PROOF ROLL TESTING SHALL BE REMOVED, RECOMPACTED, AND TESTED AGAIN.
3. JUST PRIOR TO INSTALLING AGGREGATE BASE ROCK THE SUBGRADE SHALL BE PROOF ROLLED. SUBGRADE MATERIAL THAT DOES NOT PASS PROOF ROLL TESTING SHALL BE REMOVED AND ADDITIONAL CRUSHED ROCK INSTALLED.
4. PAVEMENT SECTION IS BASED ON THE ASSUMPTION THAT PAVEMENT CONSTRUCTION WILL BE ACCOMPLISHED DURING THE DRY SEASON.
5. PAVEMENTS SUBJECT TO CONSTRUCTION TRAFFIC MAY REQUIRE REPAIR.

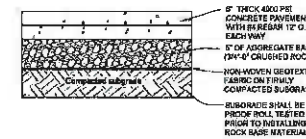
### ASPHALT SECTION - DRIVE AISLES

SCALE: NTS



#### NOTES

1. AGGREGATE BASE AND SUBBASE SHALL BE INSTALLED IN MINIMUM 6" LIFTS AND MECHANICALLY COMPACTED TO MINIMUM 98% OF THE MAXIMUM DENSITY IN ACCORDANCE WITH THE AASHTO T-99 METHOD.
2. JUST PRIOR TO INSTALLING AGGREGATE BASE ROCK THE SUBGRADE SHALL BE PROOF ROLLED. SUBGRADE MATERIAL THAT DOES NOT PASS PROOF ROLL TESTING SHALL BE REMOVED AND ADDITIONAL CRUSHED ROCK INSTALLED.



#### NOTES

1. 3/4" OF AGGREGATE BASE SHALL BE INSTALLED IN MINIMUM 6" LIFTS AND MECHANICALLY COMPACTED TO MINIMUM 98% OF THE MAXIMUM DENSITY IN ACCORDANCE WITH THE AASHTO T-99 METHOD.
2. JUST PRIOR TO INSTALLING AGGREGATE BASE ROCK THE SUBGRADE SHALL BE PROOF ROLLED. SUBGRADE MATERIAL THAT DOES NOT PASS PROOF ROLL TESTING SHALL BE REMOVED, INSTALL ADDITIONAL CRUSHED ROCK PER ENGINEER RECOMMENDATIONS.

### REINFORCED CONCRETE SECTION

SCALE: NTS



PORT OF BROOKINGS HARBOR  
LOWER HARBOR ROAD, BROOKINGS, OR 97415  
KITE FIELD RV PARK

DRAWN BY: TAM  
DATE: 17/01/21  
JOB NO: 20-XXX

C4.0  
ROAD  
SECTIONS

**GENERAL NOTES**

1. ALL WORK SHALL BE IN CONFORMANCE WITH ALL FEDERAL, STATE, AND LOCAL CODES. SPECIFICATIONS AND STANDARDS SHALL MEAN, AND ARE INTENDING TO BE, THE LATEST EDITION, AMENDMENT OR REVISION OF SUCH REFERENCES STANDARD IN EFFECT AS OF THE DATE OF THE CONTRACT. REVISIONS, APPLICABLE EXCEPT WHERE SHOWN OTHERWISE.
1.1. CURRENT OREGON STRUCTURAL SPECIALTY CODE
1.2. CURRENT OREGON PLUMBING SPECIALTY CODE
1.3. CURRENT OREGON ELECTRICAL SPECIALTY CODE
1.4. NATIONAL FIRE PROTECTION ASSOCIATION
1.5. CURRENT CURRY COUNTY STANDARDS SPECIFICATIONS FOR PUBLIC WORKS INFRASTRUCTURE.
2. WORK AND MATERIALS SHALL conform to the provisions of the CURRENT "PROVISIONS SPECIFICATIONS FOR CONSTRUCTION", CDD/AMERICAN PUBLIC WORKS ASSOCIATION (APWA), UNLESS OTHERWISE SPECIFIED BY THE SPECIFICATIONS HEREIN FOR THIS PROJECT OR THE COUNTY SPECIFICATIONS.
3. ALL WORK PERTAINING TO THIS PROJECT SHALL BE SUBJECT TO INSPECTION BY THE PROJECT ENGINEER AND/OR CITY ENGINEER PRIOR TO ANY SITE WORK. THE CONTRACTOR SHALL CONTACT THE CITY AND PROJECT ENGINEER TO SCHEDULE A PRE-CONSTRUCTION CONFERENCE.
4. PRIOR TO ANY SITE DESTABILIZATION ACTIVITY INCLUDING CLEARING, LOGGING OR GRADING, THE SITE BOUNDARIES A CLEARING LINE(S) AS SHOWN ON THESE PLANS SHALL BE LOCATED AND FIELD CHECKED BY THE PROJECT SURVEYOR AND ALL EROSION MEASURES SHALL BE INSTALLED AS IDENTIFIED ON THE EROSION & SEDIMENT CONTROL PLAN.
5. A COPY OF THESE APPROVED PLANS MUST BE ON THE JOB SITE WHEREVER CONSTRUCTION IS IN PROGRESS.
6. ALL SITE WORK IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THESE APPROVED PLANS. ANY DEVIATION FROM THESE PLANS SHALL REQUIRE PRIOR APPROVAL FROM THE ENGINEER AND APPROPRIATE PUBLIC AGENCIES PRIOR TO PERFORMING THE CHANGES IN THE FIELD.
7. ALL LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD THEREFORE BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN AND TO FURTHER LOCATE AND MARK ANY OTHER UTILITIES NOT SHOWN HEREON WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN. THE CONTRACTOR SHALL CONTACT THE UNDERGROUND UTILITIES LOCATION SERVICE (U.S.U.L.) AT LEAST TWO BUSINESS DAYS PRIOR TO CONSTRUCTION. THE APPLICATOR OR HIS REPRESENTATIVE AND THE ENGINEER SHALL BE CONTACTED IMMEDIATELY IF CONTACTS EXIST.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NECESSARY ACTIONS TO PROTECT THE LIFE, HEALTH AND SAFETY OF THE PUBLIC AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACT.
9. THE CONTRACTOR SHALL KEEP OFF-SITE STREETS CLEAN AT ALL TIMES BY SHEEPING. STREET WASHING WILL NOT BE ALLOWED WITHOUT PRIOR CITY APPROVAL.
10. THE CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS PRIOR TO INITIATING WORK. THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER WHEN CONTACTS OCCUR BETWEEN THE PLANS AND FIELD CONDITIONS. CONTACTS SHALL BE RESOLVED PRIOR TO PROCEEDING WITH CONSTRUCTION. RESOLVE ALL CONTACTS SHALL BE FORMALLY APPROVED BY THE APPLICATOR AND PROJECT ENGINEER PRIOR TO MAJOR CHANGE IN THE FIELD.
11. UNLESS OTHERWISE NOTED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ANY UTILITY RELOCATIONS WITH UTILITY COMPANIES.
12. ALL NEW UTILITIES SHALL BE INSTALLED UNDERGROUND.
13. CONTRACTOR SHALL DOCUMENT AND RECORD THE DATE OF CHANGE, PIPE INVERT, PIPE SLOPE, AND ANY OTHER CRITICAL AS-CONSTRUCT DATA. AS-BUILT DRAWINGS AND PLAN REPORTS SHALL BE REQUIRED UPON COMPLETION OF PROJECT.
14. WHEREIN COUNTY RIGHT-OF-WAY REQUIRES AN ENCROACHMENT PERMIT FROM THE LOCAL AUTHORITY.
15. APPROVED PERMANENT TRAFFIC CONTROL SIGNS AND MARKINGS WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE INSTALLED PRIOR TO FINAL APPROVAL.
16. DURING PROJECT CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL TEMPORARY CONSTRUCTION SIGNS, TRAFFIC CONTROL DEVICES, DELINEATORS AND TEMPORARY MARKINGS AS REQUIRED.
17. ACCESS BY EMERGENCY VEHICLES SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
18. ALL CLEANED AND CRUSHED MATERIAL SHALL BE REMOVED FROM THE CONSTRUCTION SITE AND DISPOSED AT AN APPROVED LOCATION.
19. ALL AREAS WITH ABANDONED UTILITY LINES, STORM DRAINS, UNDERGROUND TANKS, ETC. WHICH MAY PROVIDE VOID SPACES BENEATH THE SURFACE SHALL BE REMOVED, WHEN APPROVED BY THE ENGINEER THE VOID SPACE MAY BE FILLED WITH APPROVED MATERIAL. ALL TANKS OR HAZARDOUS MATERIALS SHALL BE DEALT WITH IN ACCORDANCE TO ALL LOCAL, STATE AND FEDERAL LAWS.
20. PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY GRADES AT SAVICUT LOCATIONS AND MATCHING OF EXISTING GRADE LOCALS.
21. CONTRACTOR IS RESPONSIBLE FOR ANY ASPHALT, GRASSING, OVERLAY AND BURRY SEAL. ALL SPECIFICATIONS SHALL COMPLY WITH ALL LOCAL AUTHORITY REQUIREMENTS.
22. CONSTRUCTION SHALL conform to the 2018 STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION PUBLISHED BY THE OREGON CHAPTER OF AASHTO, AND THE CURRENT AMENDMENTS OF THE APPROVING AGENCY.
23. ALL CONCRETE SHALL BE 3000 PSI AT 28 DAYS UNLESS OTHERWISE SPECIFIED.
24. CONTRACTOR SHALL BE RESPONSIBLE TO CLEAN AND/OR MAINTAIN EXISTING PUBLIC STREETS OF SOIL OR OTHER DEBRIS DEPOSITED BY CONSTRUCTION OPERATIONS AND REPAIR ALL STREETS DAMAGED BY CONSTRUCTION OPERATIONS IN A TIMELY MANNER TO AVOID INCONVENIENCES OR HAZARDS TO THE PUBLIC.
25. CONTRACTOR SHALL NOTIFY OREGON UTILITY NOTIFICATION CENTER AT 1-800-333-2544.
26. ALL CONTRACTORS AND SUB-CONTRACTORS SHALL BE PRE-QUALIFIED WITH THE PORT OF BROOKINGS HARBOR PRIOR TO ANY CONSTRUCTION OF THIS PROJECT.
27. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN AND SECURE APPROVAL OF THE PLAN FROM THE AGENCY AT LEAST FIVE (5) WORKING DAYS PRIOR TO STARTING WORK.
28. THE CONTRACTOR SHALL NOT PERFORM WORK WITHOUT AGENCY INSPECTION WHERE INSPECTIONS ARE REQUIRED BY THE SPECIFICATIONS.
29. WHERE CONNECTING TO AN EXISTING PIPE, THE CONTRACTOR SHALL EXPOSE THE END OF THE EXISTING PIPE AND ALLOW THE ENGINEER TO VERIFY EXIST LOCATIONS AND ELEVATION BEFORE LAYING ANY NEW PIPS ON THAT SYSTEM.
30. REQUESTS BY THE CONTRACTOR FOR CHANGE TO THE PLANS MUST BE APPROVED BY THE CONSULTING ENGINEER BEFORE CHANGES ARE IMPLEMENTED.
31. WHEN PERFORMING EXCAVATIONS, THE CONTRACTOR SHALL COMPLY WITH THE PROVISIONS OF OREGON 33.5541 TO 33.5560, WHICH INCLUDE REQUIREMENTS THAT THE CONTRACTOR HAND-EXPLORE (POT-HOLE) UNDERGROUND FACILITIES AND USE RESPONSIBLE CARE TO AVOID DAMAGING THEM.
32. PLACEMENT OR STORAGE OF SIGNS FROM THE SEWER LINE TRENCHES IS NOT PERMITTED ON HARD SURFACE STREETS WITHIN PUBLIC RIGHT-OF-WAY. SIGNS STORED IN OTHER RIGHT-OF-WAY AREAS SHALL BE COVERED TO PREVENT EROSION.
33. FORMS OF ADEQUATE WASH AND CONFIGURATION TO MEET CONCRETE THICKNESS REQUIREMENTS SHALL BE USED AROUND OUTSIZES OF OUTSIDE-DRIP MANHOLES.
34. GRANULAR MATERIALS SHALL BE OBTAINED FROM A SOURCE APPROVED BY THE PORT OF BROOKINGS HARBOR. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF THE MATERIAL.

**GRADING NOTES**

1. DOD 1000-C PERMIT IS REQUIRED.
2. UNLESS DIRECTED OTHERWISE, REMOVE, CLEAR AND GRUBBED MATERIAL FROM THE SITE AND DISPOSE AT AN APPROVED LOCATION.
3. PRIOR TO THE START OF CONSTRUCTION, VERIFY GRADES AT EACH CUT LOCATION AND MATCHING OF EXISTING GRADE LOCALS.
4. MINIMIZE TRAFFIC ON SOIL BARE GRASSY AREAS. AT THE SITE SOIL ARE EXPOSED DURING THE NEAR THE LINE OF EXISTING ROCK SHALL BE AN ENGINEERED PILE IN THE BOTTOM OF THE EXCAVATIONS MAY BE NECESSARY TO PROTECT THE SUBGRADE, TAKE ALL PRECAUTIONS TO LIMIT SURFACE DISTURBANCE AND PROTECT THE SITE SURROUNDING AREA FROM EROSION AND SLUFFING.
5. UNLESS OTHERWISE NOTED, THE BAWLING AND TESTING OF MATERIALS FOR USE ON THE JOBSITE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. ALL TESTS FOR MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY A QUALIFIED TESTER. RESULTS OF TESTS SHALL BE SENT DIRECTLY TO THE PROJECT ENGINEER AS WELL AS THE CONTRACTOR, BY THE LABORATORY. LOCATION AND FREQUENCY OF TESTS SHALL BE DETERMINED BY THE GENERAL CONTRACTOR.
6. ALL CUT AND FILL SLOPES SHALL BE MAXIMUM OF 3:1 FOR FILL AND MAXIMUM OF 2:1 FOR CUT.
7. USE OF CURRY COUNTY WATER SUPPLY FOR DUST CONTROL.

**STORM DRAIN NOTES**

1. ALL STORM DRAIN PIPE SHALL MEET THE OREGON STATE PLUMBING SPECIALTY CODE.
2. ALL PIPE SHALL BE PLACED ON STABLE EARTH, OR (IN THE OPINION OF THE PROJECT ENGINEER THE EXISTING FOUNDATION IS UNSATISFACTORY, THEN IT SHALL BE EXCAVATED BELOW GRADE AND BACKFILLED WITH A GRAVEL MATERIAL TO SUPPORT THE PIPE.
3. THE SAGGILL SHALL BE PLACED EQUALLY ON BOTH SIDES OF THE PIPE IN LAYERS WITH A LOOSE AVERAGE DEPTH OF 6" MAXIMUM DEPTH 8-10", THIRDMOURTH GRANULAR SAND LAYER. THESE CONTACTS TO LAYERS MUST EXTEND FOR ONE DIAMETER ON EACH SIDE OF THE PIPE OR TO THE SIDE OF THE TRENCH. MATERIALS TO COMPLETE THIS FILL OVER PIPE SHALL BE THE SAME AS DESCRIBED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL MANHOLE INLET AND CATCH BASIN FRAMES AND GRATES TO GRADE, JUST PRIOR TO PAVING.
5. UNLESS OTHERWISE NOTED, ALL STORM DRAIN PIPE SHALL BE CORRUGATED POLYETHYLENE PIPE. THE MATERIAL SUPPLIED UNDER THE SPECIFICATIONS OF THIS CONTRACT SHALL BE APPROVED BY THE PORT OF BROOKINGS HARBOR PRIOR TO CONSTRUCTION WITH THE LATEST AS-BUILT SPECIFICATIONS. COULPERS SHALL COVER NOT LEAST THAN ONE FULL CORRUGATION ON EACH ANNUAL SECTION OF PIPE.
6. CULVERT ENDS AT DUTIFALLS SHALL BE REVEALED TO MATCH SLOPE SLOPE. FIELD CUT OF CULVERT ENDS IS PERMITTED WHEN APPROVED BY THE ENGINEER OF RECORD AND REVEALED REPRESENTATIVE. CULVERT DUTIFALLS SHALL BE REPAIRED WITH A MAXIMUM OF 12" THICK, EXTENDED MANHOLE OF 3' FROM CULVERT END.
7. ALL STEEL PIPES, CULVERTS, TANKS AND OTHER STEEL PARTS OF ANY STORM DRAINAGE SYSTEM SHALL BE GALVANIZED OR HAVE A TREATMENT 1" THICK COATING OR SET AS SPECIFIED IN THE ODOT STANDARD SPECIFICATIONS. ALUMINUM AND CONCRETE PIPES AND STRUCTURES DO NOT REQUIRE A TREATMENT.
8. WASH WATER RETENTION/TENSION FACILITIES, STORM DRAINAGE PIPE AND CATCH BASIN SHALL BE FILMED AND CLEANED PRIOR TO CITY ACCEPTANCE.
9. ALL PIPES SHALL HAVE A MINIMUM OF 30" COVER AT THE TOP OF THE BELL OR SHALL HAVE MINIMUM COVER PER THE MANUFACTURER'S SPECIFICATIONS, WHICHEVER IS GREATER.
10. CATCH BASIN STATIONS AND OFFSETS ARE MEASURED TO CENTER OF GRADE.
11. 10:1 HORIZ. MAX. LINEAR RUN BETWEEN CLEARENCE 100' MAX AGGREGATE HORIZONTAL CHANGE IN DIRECTION WITHOUT CLEANOUT.

**SANITARY SEWER NOTES**

1. THE SANITARY SEWER SYSTEM IS TO BE OWNED AND MAINTAINED BY THE PORT OF BROOKINGS HARBOR.
2. INSPECTION AND ACCEPTANCE IS TO BE THE RESPONSIBILITY OF THE PORT OF BROOKINGS HARBOR.
3. ALL WORK SHALL conform TO THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AND CONSTRUCTION SPECIFICATIONS AND DRAWINGS. CURRY COUNTY STANDARDS SHALL TAKE PRECEDENCE.
4. CONTRACTOR SHALL NOTIFY FOR 48 HOURS IN ADVANCE OF CONSTRUCTION.
5. CONTRACTOR SHALL OBTAIN PRELIMINARY STATE WITH COORDINATOR FOR PERMITS AND WORK ON SEWER TO BE OWNED AND MAINTAINED BY THE PORT OF BROOKINGS HARBOR, INCLUDING PAPERS FOR FUTURE MAINTENANCE.
6. COMPLETE FIELD CERTIFICATION WILL BE VERIFIED PRIOR TO INITIATING WORK ON THE PORT OF BROOKINGS HARBOR FACILITIES INCLUDING COMPLETE SPACE ENTRY, PERSONAL PROTECTIVE EQUIPMENT INCLUDING BUT NOT LIMITED TO GAS DETECTOR MESSAGES, FALL PROTECTION AND COMMUNICATIONS RESCUE SYSTEM WILL BE REQUIRED.
7. CONTRACTOR IS RESPONSIBLE FOR THE TESTING OF SANITARY SEWER FACILITIES PER ODOT SPECIFICATIONS. TESTING OF SEWER FACILITIES IS SUBJECT TO THE PORT OF BROOKINGS HARBOR ACCEPTANCE.
8. CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF EXISTING STORM DRAINS DURING CONSTRUCTION. UPON REQUEST, A SEWER WYFAS PLAN MUST BE SUBMITTED TO THE PORT OF BROOKINGS HARBOR FOR APPROVAL PRIOR TO REVISIONS OR BLOCKING EXISTING MANHOLE.
9. SANITARY SEWER SHALL MEET THE OREGON STATE PLUMBING SPECIALTY CODE.
10. NOTIFY ENGINEER AS EARLY AS POSSIBLE WHEN SEWER LEAKAGE IS FOUND. REPAIR OF SUCH LEAKS IS SUBJECT TO COMPLETION OF TV INSPECTION, DYE TEST, AND APPROVAL OF LOCAL AUTHORITIES. ABRASION EXPOSURE LATERALS NOT UTILIZED FOR LOCAL AUTHORITY STANDARDS.
11. 10:1 HORIZ. MAX. LINEAR RUN BETWEEN CLEARENCE 100' MAX AGGREGATE HORIZONTAL CHANGE IN DIRECTION WITHOUT CLEANOUT.

**WATER NOTES**

- ALL WATER NOTES SHALL BE DONE IN ACCORDANCE WITH THE CURRENT REQUIREMENTS OF THE PORT OF BROOKINGS HARBOR STANDARDS STANDARD SPECIFICATIONS.
1. SERVICE CONNECTIONS ARE TO BE INSTALLED FOR EACH HOUSE. PER CURRY COUNTY STANDARDS.
2. DRYER GAS EXISTING MAINS SHALL NOT BE CHANGED WITHOUT WRITTEN AUTHORIZATION OF THE PORT OF BROOKINGS HARBOR.
3. NEW MAINS ARE TO BE PRESSURE TESTED, DECONNECTED AND PROVEN TO BE WATER TIGHT BEFORE BEING PLACED INTO SERVICE. IN SERVICE BY THE PORT OF BROOKINGS HARBOR. PRESSURE TESTING SHALL NOT BE DONE WITH ALL EXCAVATION AND BACKFILL UP TO COMPLETE HAS BEEN ESTABLISHED.
4. DETAIL SAGGILLS TO TOP OF WATER MAINS AND FIRE HYDRANT RUNS SHALL BE COMPACTED IN ACCORDANCE WITH CURRY COUNTY STANDARDS SPECIFICATIONS FOR TRENCH EXCAVATION AND BACKFILL. MATERIAL AND COMPACTION SHALL MEET THE REQUIREMENTS OF THE CONTRACTING AGENCY.
5. WATER MAINS AND FIRE HYDRANTS ARE TO BE INSTALLED WITH REFERENCE ALIGNMENT AND GRADE STATUS AND MUST UPON NOTIFICATION OF CURRY COUNTY ENGINEER.
6. WATER MAINS ARE TO BE INSTALLED AFTER SEWERS.
7. FIRE HYDRANT MAINS ARE TO BE INSTALLED BEFORE CURBS AND CUTTERS. IN THE EVENT A WATER MAIN IS INSTALLED LARGER THAN EIGHT (8) INCHES, OR IF THE MAIN HAS MORE THAN FIVE (5) INCHES OF COVER, THE CONTRACTOR WILL BE REQUIRED TO INSTALL AN OFFSET ONLY TO STANDARD DETAIL, 4:30 TO PERMIT USE OF A STANDARD 36" BURY FIRE HYDRANT.
8. STUBS SERVICE MAINS SHALL BE INSTALLED BEFORE CURB AND CUTTER AND AFTER PUBLIC UTILITY GAS MAINS ARE GRADED TO CURB LEVELS.
9. APPROVED PLANS AND SPECIFICATIONS SHALL BE AVAILABLE AT SITES OF THE CONSTRUCTION AT ALL TIMES DURING CONSTRUCTION OF WATER FACILITIES.
10. SEPARATION OF WATER MAIN, INCLUDING SERVICE LINES AND SANITARY SEWER, SHALL BE IN ACCORDANCE WITH CURRENT OREGON STATE HEALTH DEPARTMENT. THE SEPARATION DEPTH SHALL BE AS FOLLOWS: (STANDARDS DETAILS) THERE SHALL BE A 10 FOOT SEPARATION CENTER LINE TO CENTER LINE. PER CURRY COUNTY STANDARDS (STANDARDS DETAILS) FOR:
10.1 NO AGGREGATE UNDER APPLICABLES OR OTHER STRUCTURES OF ANY KIND SHALL BE WITHIN FIVE (5) FEET HORIZONTALLY OR ANY WATER FACILITY VERTICALITY FROM WATER FACILITY.
10.2 LINES OF CONSTRUCTION SHALL BE A MINIMUM OF 18 INCHES (VERTICALLY) FROM WATER AND SANITARY SEWER FACILITIES ARE CONCERNED.
10.3 UNLESS OTHERWISE NOTED, THE BAWLING AND TESTING OF MATERIALS FOR USE ON THE JOBSITE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. ALL TESTS FOR MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY A QUALIFIED TESTER. RESULTS OF TESTS SHALL BE SENT DIRECTLY TO THE PROJECT ENGINEER AS WELL AS THE CONTRACTOR, BY THE LABORATORY. LOCATION AND FREQUENCY OF TESTS SHALL BE DETERMINED BY THE GENERAL CONTRACTOR.
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11.1 NO AGGREGATE UNDER APPLICABLES OR OTHER STRUCTURES OF ANY KIND SHALL BE WITHIN FIVE (5) FEET HORIZONTALLY OR ANY WATER FACILITY VERTICALITY FROM WATER FACILITY.
11.2 LINES OF CONSTRUCTION SHALL BE A MINIMUM OF 18 INCHES (VERTICALLY) FROM WATER AND SANITARY SEWER FACILITIES ARE CONCERNED.
11.3 UNLESS OTHERWISE NOTED, THE BAWLING AND TESTING OF MATERIALS FOR USE ON THE JOBSITE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. ALL TESTS FOR MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY A QUALIFIED TESTER. RESULTS OF TESTS SHALL BE SENT DIRECTLY TO THE PROJECT ENGINEER AS WELL AS THE CONTRACTOR, BY THE LABORATORY. LOCATION AND FREQUENCY OF TESTS SHALL BE DETERMINED BY THE GENERAL CONTRACTOR.
12. BLASTING OR EXPLOSIVE WORK SHALL NOT BE ALLOWED WITHIN 30 FEET OF EXISTING WATER FACILITIES AND ONLY THEN USING PROPER INDUSTRY STANDARDS AND THROUGH A PERMIT PROCESSES WITH THE FIRE DEPARTMENT OR OTHER AGENCY JURISDICTION.
13. THE CURRY COUNTY REQUIREMENTS SHALL BE USED ON ALL DRAIN AND WATER LINES.
14. ALL DRY TAP WATER SERVICES AND ALL RELEASE VALVES SHALL BE INSTALLED BY A CURRY COUNTY PRE-CALCULATED INSTALLER.
15. ONLY STATE OF OREGON APPROVED BACKFLOW PREVENTERS SHALL BE INSTALLED.

**APPLICABLE CODES**

- ALL WORK SHALL BE IN CONFORMANCE WITH ALL FEDERAL, STATE, AND CITY CODES. SPECIFICATIONS AND STANDARDS SHALL MEAN, AND ARE INTENDING TO BE, THE LATEST EDITION, AMENDMENT OR REVISION OF SUCH REFERENCES STANDARD IN EFFECT AS OF THE DATE OF THE CONTRACT DOCUMENTS, UNLESS OTHERWISE SPECIFIED BY THE GENERAL CONTRACTOR.
- OREGON STANDARDS DRAWINGS (SDS)
- CURRY COUNTY ADOPTED STANDARD DETAILS AND SPECIFICATIONS
- EMC/OREGON PLUMBING SPECIALTY CODE, LATEST EDITION
- OCEAN COUNTY FIRE CODE, LATEST EDITION
- WYOMING NATIONAL FIRE PROTECTION ASSOCIATION 600 LIFE SAFETY CODE, LATEST EDITION

**PAVEMENT MARKING NOTES**

1. ALL STOPPING AND MARKING SHALL BE PER LOCAL STANDARDS AS APPROVED BY THE LOCAL AUTHORITY.
2. ALL STOPPING AND MARKING INTERIOR PUBLIC RIGHT OF WAY SHALL BE PER LOCAL AUTHORITY STANDARDS.
3. ALL STOPPING SHALL MEET ADA REQUIREMENTS.

**ADA NOTES**

1. ALL ADA ACCESSIBLE FACILITIES SHALL BE INSTALLED PER THE CURRENT ADA REQUIREMENTS AND PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG)
2. IF IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THAT THE ACCESSIBILITY OF EXISTING FACILITIES WITH AMERICAN DISABILITY ACT AND ALL LOCAL CODES.
3. THE ACCESSIBLE PATH OF TRAVEL AS INDICATED ON PLANS IS A MINIMUM ACCESSIBLE ROUTE WITHOUT ANY ABSOLUTE LEVEL CHANGES EXCEEDING 1/4" MAXIMUM, OR VERTICAL CHANGES NOT EXCEEDING 1/4" MAXIMUM. SURFACE IS SUFFICIENTLY STABLE, FIRMS, AND SMOOTH. CROSS SLOPE DOES NOT EXCEED 1:48 AND WORK IN THE DIRECTION OF TRAVEL IS LESS THAN 1:48 UNLESS OTHERWISE NOTED.

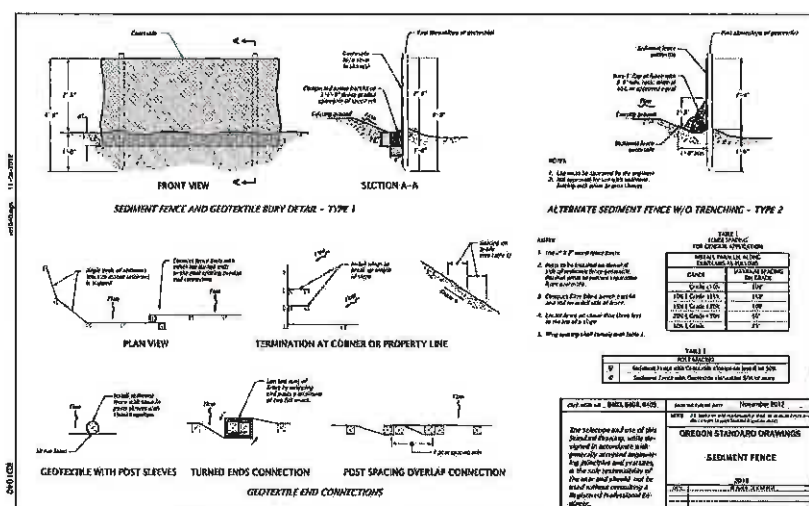
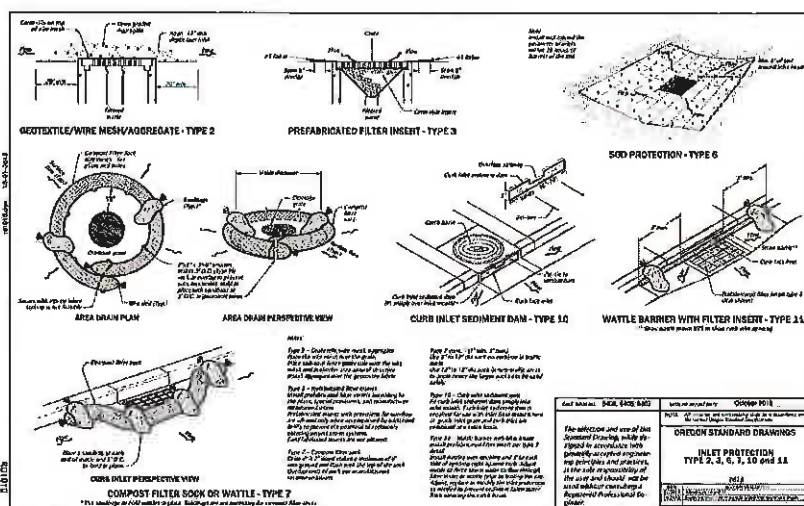
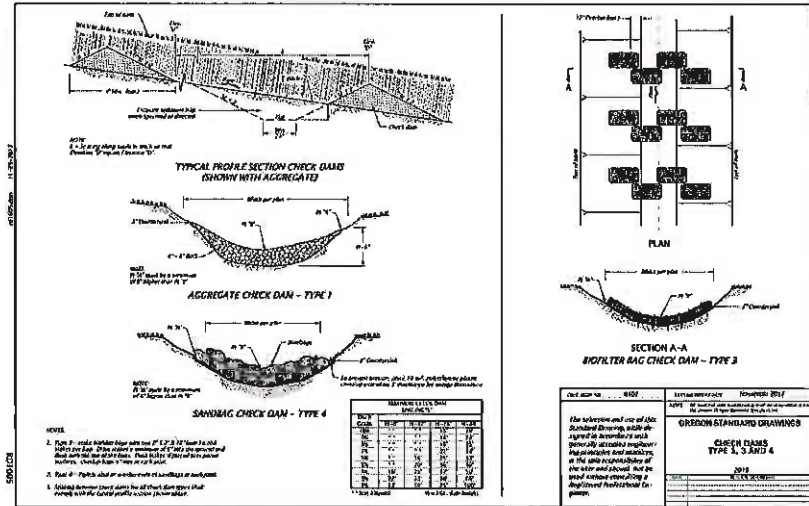
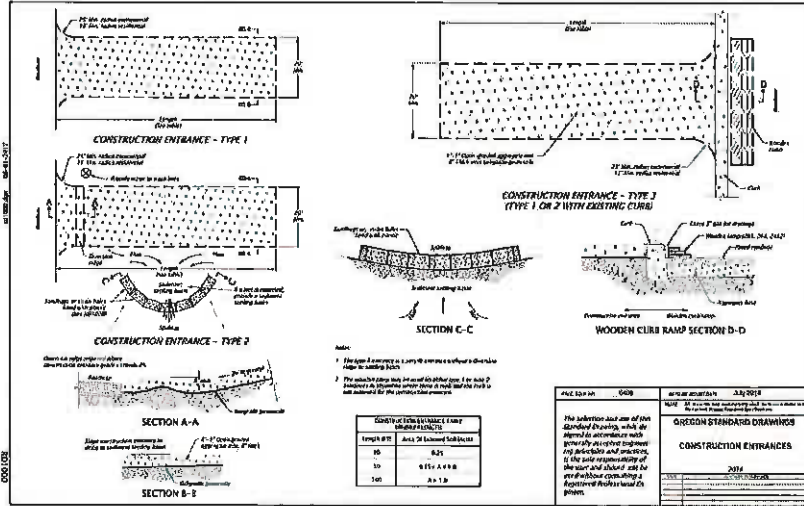
**INSPECTION AND TESTING NOTES**

1. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING ALL TESTING, INSPECTIONS, AND SPECIAL INSPECTIONS AS REQUIRED BY PROJECT ENGINEER, CURRENT BUILDING CODES, OR JURISDICTIONS HAVING AUTHORITY. ALL TESTING MUST BE COMPLETED AND APPROVED PRIOR TO SUBSEQUENT WORK. ADDITIONAL OR PRESENT TESTS MAY BE REQUIRED BY AGENCY, BUILDING OFFICIAL, OR ENGINEER.
2. TESTING MUST BE PERFORMED BY AN APPROVED INDEPENDENT TESTING LABORATORY RETAINED BY CONTRACTOR.
3. IN ADDITION TO REPLACE CEMENT TESTING, THE SUB-GRADE AND BASE ROCK SHALL BE PROOF-ROLLED WITH A LOADED QUART TROLK ON READY NON-HERBERTY ROLLER. SIGNS SHALL BE REPEALED AND RE-COMPACTED AT REPEATED WITH APPROVED INDEPENDENT TROLK ROLL IF THEY DO NOT SUBSIDITATE A FINAL UNDER PROPER CONDITION. BACKGROUND ROLL SHALL TAKE PLACE LESS THAN 24 HOURS PRIOR TO PAVING AND SHALL BE WITNESSED BY THE ENGINEER OR GOVERNMENT AGENCY.
4. THE APPROVED INDEPENDENT LABORATORY SHALL PROVIDE CERTIFICATION STAMPED BY AN ENGINEER LICENSED IN THE STATE OF OREGON THAT THE SUBGRADE IS PREPARED AND ALL ENGINEERED FILLS ARE PLACED IN ACCORDANCE WITH THE CONTRACT DRAWINGS AND DOCUMENTS.
5. PROVIDE BACKGROUND WITH REPORT ELEVATION VERIFICATION FOR SUB-GRADE AND TOP OF AGGREGATE PRIOR TO PAVING CONCRETE, ASPHALT, AND/OR STRUCTURES WHEN INCLUDED IN THE PROJECT.

Curry County - Oregon  
Engineering, Maintenance, Construction  
1000 Lower Harbor Road, Brookings, OR 97415  
Phone: (541) 337-1212  
Fax: (541) 337-1213  
www.emc-inc.com

PORT OF BROOKINGS HARBOR  
1000 LOWER HARBOR ROAD, BROOKINGS, OREGON 97415  
WHITE FIELD RV PARK

DRAWN BY: TAM  
DATE: 17/01/21  
JOB NO: 20-XXXX  
C4.1  
GENERAL NOTES



EMC

Engineering & Construction

1100 NE Oregon Street, Portland, OR 97232

503.255.1234

www.emcinc.com



PORT OF BROOKINGS HARBOR  
LOWER HARBOR ROAD, BROOKINGS, OR 97415

KITE FIELD RV PARK

DRAWN BY: TAM

DATE: 17/01/21

JOB NO: 20-XXXX

**C5.0**

ECS STANDARD DETAILS

**ESCP STANDARD NOTES:**

- 1) HOLD A PRE-CONSTRUCTION MEETING OF PROJECT CONSTRUCTION PERSONNEL THAT INCLUDES THE ENGINEER TO DISCUSS EROSION AND SEDIMENT CONTROL MEASURES AND CONSTRUCTION WITH: (SCHEDULE A.A.(1), (3) AND (4)).
- 2) ALL INSPECTIONS MUST BE MADE IN ACCORDANCE WITH DEC 1000 PERMIT REQUIREMENTS: (SCHEDULE A, 1.2, 1.3 AND SCHEDULE A, 3). INSPECTION LOGS MUST BE KEPT IN ACCORDANCE WITH DEC 1000 PERMIT REQUIREMENTS: (SCHEDULE A.1.2.(A) AND 3.2).
- 3) RETURN A COPY OF THE ESCP AND ALL REVISIONS ON SITE AND MAKE IT AVAILABLE ON REQUEST TO DELEGATED OR LOCAL MUNICIPALITY. DURING NORMAL PERIODS OF GREATHER THAN SEVEN (7) WORKDAYS OR CALENDAR DAYS. THE ABOVE INFORMATION MUST BE RETAINED BY THE PERMIT REGISTARANT BUT DOES NOT NEED TO BE AT THE CONSTRUCTION SITE: (SCHEDULE A.2.(C)).
- 4) ALL PERMIT REGISTARANT MUST IN EVENT THE ESCP FAILS TO IMPLEMENT ANY OF THE CONTROL MEASURES OR PRACTICES DESCRIBED IN THE ESCP IS A VIOLATION OF THE PERMIT: (SCHEDULE A.4.A).
- 5) THE ESCP MUST BE ACCURATE AND REFLECT SITE CONDITIONS: (SCHEDULE A.1.1.(3)).
- 6) SUBMISSION OF ALL ESCP REVISIONS IS NOT REQUIRED. SUBMITAL OF THE ESCP REVISIONS IS ONLY UNDER ESCP CONDITIONS. SUBMIT ALL NECESSARY REVISIONS TO DEC OR DATED WITHIN 10 DAYS: (SCHEDULE A.1.2.(A), AND 3).
- 7) PREPARE CLEARING AND GRADING TO THE MAXIMUM EXTENT PRACTICAL TO PREVENT EXPOSED INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION: (SCHEDULE A.1.1.(3)).
- 8) IDENTIFY, MARK AND PROTECT (BY CONSTRUCTION FENCING OR OTHER MEANS) CRITICAL REPARATION AREAS AND VEGETATION INCLUDING IMPORTANT TREES AND ASSOCIATED ROOTING ZONES AND VEGETATION AREAS TO BE PRESERVED. IDENTIFY VEGETATIVE BUFFER ZONES BETWEEN THE SITE AND SENSITIVE AREAS (E.G., WETLANDS), AND OTHER AREAS TO BE PRESERVED, ESPECIALLY IN URBAN AREAS: (SCHEDULE A.A.(1), (4) AND (5)).
- 9) REMOVE EXISTING VEGETATION WHEN PRACTICAL AND REVEGETATE OPEN AREAS. REVEGETATE OPEN AREAS WHEN PRACTICABLE BEFORE AND AFTER GRADING OR CONSTRUCTION. IDENTIFY THE TYPE OF VEGETATIVE SEE USE LOG: (SCHEDULE A.3.A.V).
- 10) MAINTAIN AND DELINEATE ANY EXISTING NATURAL BUFFER WITHIN THE SOFTWER OF WATERS OF THE STATE: (SCHEDULE A.7.1.B AND 7.A.V).
- 11) MAINTAIN PERIMETER SEDIMENT CONTROL, INCLUDING STEEP GRASS SHELTER PROTECTION AS WELL AS ALL SEDIMENT BARRIERS, TRAPS, AND BARBERS PRIOR TO LAND DISTURBANCE: (SCHEDULE A.5.(2)).
- 12) CONTROL BOTH PEAK FLOW RATES AND TOTAL STORMWATER VOLUME, TO MINIMIZE EROSION AT OUTLETS AND DOWNSLOPE CHANNELS AND AT BREAKAWAYS: (SCHEDULE A.7.(2)).
- 13) CONTROL SEDIMENT AS NEEDED ALONG THE SITE PERIMETER AND AT ALL OPERATIONAL INTERNAL SEDIMENT CONTROL STRUCTURES AT ALL TIMES DURING CONSTRUCTION, BOTH INTERNALLY AND AT THE SITE BOUNDARY: (SCHEDULE A.7.(3)).
- 14) ESTABLISH CONCRETE TRUCK AND OTHER CONCRETE EQUIPMENT WASHOUT AREAS BEFORE BEGINNING CONCRETE WORK: (SCHEDULE A.4.(4)).
- 15) APPLY TEMPORARY AND/OR PERMANENT SOIL STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS AS GRADING PROGRESSES. TEMPORARY OR PERMANENT STABILIZATION MEASURES ARE NOT REQUIRED FOR AREAS THAT ARE INTENDED TO BE LEFT UNCOVERED. SUCH AS DIRT ACCESS ROADS ON SITE: (SCHEDULE A.4.(4) AND 4.5).
- 16) ESTABLISH MATERIAL AND WASTE STORAGE AREAS, AND OTHER NON-TOXIC WASTE CONTROL: (SCHEDULE A.A.(1), (7)).
- 17) PREVENT TRACKING OF SEDIMENT ON PUBLIC OR PRIVATE ROADS USING BMPs SUCH AS: CONSTRUCTION ENTRANCE, GRAVELED OR PAVED EXITS AND PAVED AREAS, GRAVEL OR ALL UNPAVED ROADS LOCATED ON SITE, OR USE AN EXIT TIRE WASH. THESE BMPs MUST BE IN PLACE PRIOR TO ANY CONSTRUCTION ACTIVITY: (SCHEDULE A.4.(4) AND 4.6.1.(2)).
- 18) WHEN TRACKING SATURATED SOIL FROM THE SITE, EITHER USE WATER-TIGHT TRUCKS OR DRAIN LOADS ON SITE: (SCHEDULE A.2.(1), (5)).
- 19) CONTROL PROBLEMS OCCURRING FROM LEAVING THE CONSTRUCTION SITE. I.E., CONCRETE WASH-OUT, WASTEWATER FROM CLEAN-UP OF STEEL, PAINT AND SPRAY COMPRESSORS: (SCHEDULE A.4.(6)).
- 20) USE BMPs TO PREVENT OR MINIMIZE STORMWATER EXPOSURE TO POLLUTANTS FROM SPILLS, VEHICLE AND EQUIPMENT FUELS, MAINTENANCE, AND STORAGE. OTHER CLEANING AND MAINTENANCE ACTIVITIES, AND WASTE HANDLING ACTIVITIES. THESE ACTIVITIES INCLUDE FUEL, OIL, AND OTHER OILS FROM VEHICLES AND MACHINERY, AS WELL AS GREASE, FERTILIZER, PESTICIDES AND HERBICIDES, PAINTS, SOLVENTS, CURING COMPOUNDS AND ADHESIVES FROM CONSTRUCTION OPERATIONS: (SCHEDULE A.1.1.(2)).
- 21) IMPLEMENT THE FOLLOWING SUPERVISOR APPLICABLE: (WITHIN SITE) PROCEDURES AND RESPONSE PROTOCOLS. EMPLOYEE TRAINING ON SPILL PREVENTION AND PROPER DISPOSAL PROCEDURES. SPILL KITS IN ALL VEHICLES. REGULAR MAINTENANCE SCHEDULE FOR VEHICLES AND MACHINERY. BATTERIES, BATTERIES AND STORAGE CONTROLS, TRAINING AND STORAGE, AND COVERED STORAGE AREAS FOR WASTE AND SUPPLIES: (SCHEDULE A.4.6.A).  
 22) USE WATER, SOIL-BINDING AGENT OR OTHER BEST CONTROL TECHNIQUE AS NEEDED TO AVOID VIBRO-BLOW BOWLS: (SCHEDULE A.2.A.1).
- 23) THE APPLICATION RATE OF FERTILIZER USED TO ESTABLISH VEGETATION MUST FOLLOW MANUFACTURER'S RECOMMENDATIONS TO MINIMIZE NUTRIENT RELEASES TO SURFACE WATERS. EXERCISE CAUTION WHEN USING TIME-RELEASE FERTILIZERS WITH AN ANY WATERWAY ADJACENT ZONE: (SCHEDULE A.3.B.1).
- 24) IF AN ACTIVE TREATMENT SYSTEM FOR EXAMPLE ELECTRO-OXIDATION, FLOCCULATION, FILTRATION, ETC) FOR SEDIMENT OR OTHER POLLUTANT REMOVAL IS EMPLOYED, BRIEF AN OPERATION AND MAINTENANCE PLAN INCLUDING SYSTEM SCHEMATIC, LOCATION OF CRITICAL LOCATION ON PLAN, LOCATION OF INDICATOR, DIAGNOSTIC OPERATIONS DEVICE, DESIGN, AND A ZONE WITH PLAN AND PRODUCE. BEFORE OPERATING THE TREATMENT SYSTEM, OBTAIN PLAN APPROVAL BEFORE OPERATING THE TREATMENT SYSTEM, OPERATE AND MAINTAIN THE TREATMENT SYSTEM ACCORDING TO MANUFACTURER'S SPECIFICATIONS: (SCHEDULE A.4.B).
- 25) TEMPORARILY STABILIZE SOILS AT THE END OF THE BRIEF PERIODS INCLUDING AND WHEREVER, IF NEEDED, THE REGISTARANT IS RESPONSIBLE FOR ENSURING THAT SOILS ARE STABLE DURING RAIN EVENTS AT ALL TIMES OF THE YEAR: (SCHEDULE A.7.1).
- 26) AS NEEDED BASED ON WEATHER CONDITIONS, THE END OF EACH WORKDAY SOIL STABILIZERS MUST BE STABILIZED ON COVERED, OR OTHER BMPs MUST BE IMPLEMENTED TO PREVENT DISCHARGES TO SURFACE WATERS OR CONFORMANCE SYSTEMS LEADING TO SURFACE WATER: (SCHEDULE A.7.1.1).
- 27) CONSTRUCTION ACTIVITIES MUST AVOID OR MINIMIZE EXCAVATION AND BARE GROUND ACTIVITIES DURING WET WEATHER: (SCHEDULE A.7.A.1).
- 28) SEDIMENT FENCE- REMOVE TRAPPED SEDIMENT BEFORE IT REACHES ONE THIRD OF THE ABOVE GROUND FENCE HEIGHT AND BEFORE FENCE TERMINAL: (SCHEDULE A.4.C.3).
- 29) OTHER SEDIMENT BARRIERS (SUCH AS BARBERS) SHOULD BE REMOVED BEFORE IT REACHES TWO INCHES DEPTH ABOVE GROUND HEIGHT AND BEFORE BMP REMOVAL: (SCHEDULE A.4.C.3).
- 30) CATCH BARBERS- CLEAN BEFORE REPLETION CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT. REMOVE BARBERS AND SEDIMENT TRAPS- REMOVE TRAPPED SEDIMENT BEFORE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT AND AT COMPLETION OF PROJECT: (SCHEDULE A.4.C.1, 1.1).
- 31) WINDM-ON HOODS- REMOVE SEDIMENT THAT HAS LEFT THE CONSTRUCTION SITE. MUST BE REMOVED, INVESTIGATE THE CAUSE OF THE SEDIMENT RELEASE AND IMPLEMENT STEPS TO PREVENT A RECCURENCE OF THE DISCHARGE WITHIN THE SAME 24 HOUR. ANY WASH TRAP CLEAN-UP OF SEDIMENT SHALL BE PERFORMED ACCORDING TO THE OREGON DIVISION OF STATE LANDS REQUIRED THEREIN: (SCHEDULE A.7.1.1).
- 32) THE INTENTIONAL WINDING OF SEDIMENT INTO OTHER BARRIERS OR DRAINAGE VALVES MUST NOT OCCUR. WASHING OR DRY WASHING AND MANUAL PICKUP MUST BE USED TO CLEANUP RELEASED SEDIMENTS: (SCHEDULE A.4.B.1).
- 33) THE ENTIRE SITE MUST BE TEMPORARILY STABILIZED USING VEGETATION OR A HEAVY MULLCH LAYER. TEMPORARY SEEDING OR OTHER METHODS SHOULD ALL CONSTRUCTION ACTIVITIES CEASE FOR 30 DAYS OR MORE: (SCHEDULE A.7.2).
- 34) PROVIDE TEMPORARY STABILIZATION FOR THAT PORTION OF THE SITE WHERE CONSTRUCTION ACTIVITIES CEASE FOR 30 DAYS OR MORE WITH A COVERS OF BLOWN STRAW OR A TACKLER, LOOSE STRAW, OR AN ADEQUATE COVERING OF COMPOST MULCH UNTIL WORK RESUMES ON THAT PORTION OF THE SITE: (SCHEDULE A.7.2).
- 35) DO NOT REMOVE TEMPORARY SEDIMENT CONTROL PRACTICES UNTIL PERMANENT VEGETATION OR OTHER COVER OF EXPOSED AREAS IS ESTABLISHED. ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED, ALL TEMPORARY EROSION CONTROL AND RELATED SOILS MUST BE REMOVED AND DEPOSITED OF PROPERLY, UNLESS DOWNSLOPE CONDUCTS WITH LOCAL REGULATIONS: (SCHEDULE A.6.C.1.(1) AND 3.2.C.3.(1) AND 3).

**WET WEATHER CONSTRUCTION**

THE SITE SOILS ARE CONSIDERED VERY VULNERABLE AND AS SUCH ARE SUSCEPTIBLE TO DISTURBANCE BY CONSTRUCTION EQUIPMENT. PARTICULARLY DURING PERIODS OF WET WEATHER. DURING WET WEATHER, THE CONTRACTOR SHALL MINIMIZE TRACKING OF PREPARED SOIL, SUBGRADE AREAS. IF THE SITE SOILS ARE EXPOSED DURING WET WEATHER, THE USE OF PREPARED ROCK OR GRAVEL AS EROSION PROTECTION IS THE BOTTOM OF THE HIERARCHY. IT IS NECESSARY TO PROTECT THE SUBGRADE. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO LIMIT SURFACE DISTURBANCE AND PROTECT THE SITE GRADING AREA FROM EXCESSIVE RUNOFF EROSION.

INSPECTION FREQUENCY		
SITE CONDITION	INSPECTION FREQUENCY	MINIMUM FREQUENCY
1. ACTIVE PERIOD	DAILY	EVERY TWO WEEKS
2. PERIOD TO THE SITE BECOMING INACTIVE ON ANTICIPATION OF SITE INACCESSIBILITY	DAILY (OR MORE FREQUENTLY AS NECESSARY)	AT LEAST ONCE EVERY TWO WEEKS, REASSURE OF WHETHER OR NOT RUNOFF IS OCCURRING
3. INACTIVE PERIODS GREATER THAN FOURTEEN (14) CALENDAR DAYS	ONCE EVERY MONTH	ONCE SO ENSURE THAT EROSION AND SEDIMENT CONTROL MEASURES ARE IN WORKING ORDER. ANY NECESSARY MAINTENANCE AND REPAIRS MUST BE MADE PRIOR TO LEAVING THE SITE.
4. PERIODS CLOSER WHICH THE SITE IS INACCESSIBLE DUE TO INCLEMENT WEATHER.	IF PRACTICAL, INSPECTIONS MUST OCCUR ONLY AT A SHELTY AND ACCESSIBLE OCCURRENCE POINT OR DOWNSTREAM LOCATION.	
5. PERIODS DURING WHICH DISCHARGES IS LIKELY DUE TO FROZEN CONDITIONS	MONTHLY	REASSESS MONITORING IMMEDIATELY UPON MELT, OR WHEN WEATHER CONDITIONS MAY BE DETERMINED LIKELY.

**IMPLEMENTATION OF CONTROL MEASURES:**

- A. ALL PERMIT REGISTARANT MUST IMPLEMENT THE ESCP (PARAGRAPHS 1,2), FAILLURE TO IMPLEMENT ANY OF THE CONTROL MEASURES OR PRACTICES DESCRIBED IN THE ESCP IS A VIOLATION OF THE PERMIT.
- B. ALL PERMIT REGISTARANT MUST PREVENT THE DISCHARGE OF SIGNIFICANT AMOUNTS OF SEDIMENT TO SURFACE WATERS OR CONFORMANCE SPOTS LEADING TO SURFACE WATER. THE FOLLOWING CONDITIONS INDICATE THAT A SIGNIFICANT AMOUNT OF SEDIMENT HAS LEFT OR IS LIKELY TO LEAVE THE SITE:
  1. SARTY SLIDES OR WASH FLOWS.
  2. CONCENTRATED PLOTS OF STORMWATER SUCH AS RILLS, RAVELTES OR CHANNELS THAT CAUSE EROSION WHEN EACH FLOW ARE NOT FILTERED, SETTLED OR OTHERWISE TREATED TO REMOVE SEDIMENT.
  3. SEDIMENT LOADS OR TURBIDITY OF STORMWATER THAT ARE NOT FILTERED OR SETTLED TO REMOVE SEDIMENTS AND TURBIDITY.
  4. DISCHARGE OF SEDIMENT AT THE CONSTRUCTION SITE IN AREAS THAT DRAIN TO UNPROTECTED STORMWATER INLETS OR TO CATCH BASINS THAT DISCHARGE TO SURFACE WATERS, INLETS AND CATCH BASINS WITH FULFILLS SEDIMENT CONTROLS SUCH AS GRASS BANKS OR UNDERGROUND WATERSHEDS.
  5. DEPOSITS OF SEDIMENT FROM THE CONSTRUCTION SITE ON ANY PROPERTY (INCLUDING PUBLIC AND PRIVATE STREETS) OUTSIDE OF THE CONSTRUCTION ACTIVITY COVERED BY THIS PERMIT.
- C. THE PERMIT REGISTARANT MUST ENSURE THE CONTROL MEASURES OR PRACTICES DESCRIBED IN THE ESCP ARE IMPLEMENTED ACCORDING TO THE FOLLOWING REQUIREMENTS:
  - I. BEFORE CONSTRUCTION
    1. IDENTIFY, MARK AND PROTECT (WITH CONSTRUCTION FENCING OR OTHER MEANS) CRITICAL REPARATION AREAS AND VEGETATION INCLUDING IMPORTANT TREES AND ASSOCIATED ROOTING ZONES AND VEGETATION AREAS TO BE PRESERVED.
    2. IDENTIFY VEGETATIVE BUFFER ZONES BETWEEN THE SITE AND SENSITIVE AREAS (FOR EXAMPLE, WETLANDS, AND OTHER AREAS) TO BE PRESERVED, ESPECIALLY IN URBAN AREAS.
    3. HOLD A PRE-CONSTRUCTION MEETING WITH EACH OF PROJECT CONSTRUCTION PERSONNEL THAT INCLUDES THE ENGINEER REQUIRED BY CONDITION A, 1.2.8 TO DISCUSS EROSION AND SEDIMENT CONTROL MEASURES AND CONSTRUCTION WITH: (SCHEDULE A.A.(1), (4) AND (5)).
    4. INSTALL PERIMETER SEDIMENT CONTROL, INCLUDING STEEP GRASS SHELTER PROTECTION AS WELL AS ALL SEDIMENT BARRIERS, TRAPS, AND BARBERS.
    5. ESTABLISH CONCRETE TRUCK AND OTHER CONCRETE EQUIPMENT WASHOUT AREAS BEFORE BEGINNING CONCRETE WORK.
    6. ESTABLISH MATERIAL AND WASTE STORAGE AREAS, AND OTHER NON-TOXIC WASTE CONTROL.
    7. ESTABLISH STREAM BANKS AND CONSTRUCT THE PRIMARY RUNOFF CONTROL MEASURES TO PROTECT AREAS FROM CONCENTRATED FLOWS.
  - II. DURING CONSTRUCTION
    1. LAND CLEARING, GRADING AND ROADWAYS.
      - (A) BEGIN LAND CLEARING, EXCAVATION, TRENCHING, CUTTING OR GRADING ONLY AFTER INSTALLING APPROPRIATE SEDIMENT AND RUNOFF CONTROL MEASURES.
      - (B) INITIAL APPROPRIATE EROSION AND SEDIMENT CONTROL BMPs FOR ALL ROADWAYS INCLUDING DRIVEWAY ROADWAYS.
      - (C) INITIAL ADDITIONAL CONTROL MEASURES AS WORK PROGRESSES AS NEEDED.
      - (D) PREPARE CLEARING AND GRADING TO THE MAXIMUM EXTENT PRACTICAL TO PREVENT EXPOSED INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION.
    2. SURFACE STABILIZATION.
      - (A) APPLY TEMPORARY OR PERMANENT SOIL STABILIZATION MEASURES FOR EXPOSED, TEMPORARY AND PERMANENT SEEDING OR MULLCHING IMMEDIATELY ON ALL DISTURBED AREAS AS WORK IS COMPLETED.
      - (B) STABILIZATION OF DISTURBED AREAS MUST BE INITIATED IMMEDIATELY AFTER EACH DISTURBING ACTIVITY HAS BEEN PERMANENTLY CEASED ON ANY PORTION OF THE SITE.
    3. CONSTRUCTION AND MAINTENANCE.
      - (A) KEEP EROSION AND SEDIMENT CONTROL MEASURES IN PLACE FOR THE DURATION OF CONSTRUCTION, INCLUDING PROTECTION FOR ACTIVE SEDIMENT BARRIERS AND APPROPRIATE NON-TOXIC WASTE POLLUTION CONTROLS.
  - III. FINAL STABILIZATION AND LANDSCAPING
    1. PROVIDE PERMANENT VEGETATION CONTROL MEASURES ON ALL EXPOSED AREAS.
    2. REMOVE AND PROPERLY DISPOSE OF CONSTRUCTION MATERIAL AND WASTE, INCLUDING SEDIMENT RETAINED BY TEMPORARY BMPs.
    3. REMOVE ALL TEMPORARY CONTROL MEASURES AS AREAS ARE STABILIZED, UNLESS DOWNSLOPE CONDUCTS WITH LOCAL REGULATIONS.

**ESCP RESPONSIBILITY**

IT IS THE INTENT OF THIS TEMPORARY EROSION AND SEDIMENT CONTROL PLAN THAT STORM WATER RUNOFF BE CONTROLLED AT ALL TIMES TO PREVENT SOIL EROSION AND TO MAINTAIN RUNOFF QUALITY. ANY AND ALL MEASURES NECESSARY TO DO SO SHALL BE EMPLOYED BY THE CONTRACTOR.

1. REMEDIATION OF SITE, WEATHER, SOIL OR OTHER CONDITIONS, THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ENSURING THAT EROSION DOES NOT OCCUR AND THAT POLLUTION DOES NOT LEAVE THE SITE OR EXTERIOR INTO ANY CREEK, STREAM, WETLAND OR WATER BODY ON THE SITE.
2. BEYOND THE MINIMUM REQUIREMENTS SHOWN ON THE PLAN, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING AND IMPLEMENTING APPROPRIATE METHODS, BEST MANAGEMENT PRACTICES (BMPs) FOR STORM WATER TREATMENT AND CONTROL, THAT MEET THE REQUIREMENTS OF THE STATE AND LOCAL JURISDICTION.
3. THE CONTRACTOR SHALL VERIFY ALL WATER QUALITY CONCERNS AND ACTIVITIES TO THE PROJECT ENGINEER. IN THE EVENT THAT THE INSTALLED WATER QUALITY CONTROL MEASURES ARE INEFFECTIVE AT CONTROLLING EROSION AND SEDIMENT, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY AND CONSULT WITH THE PROJECT ENGINEER TO FIND AN APPROPRIATE REMEDY. ALL CONSTRUCTION ACTIVITIES WITH THE EXCEPTION OF EROSION AND SEDIMENT CONTROL MEASURES, SHALL CEASE UNTIL SUCH TIME AS THE WATER QUALITY IS BROUGHT UNDER CONTROL.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING WEATHER FORECASTS AND ANTICIPATING BOTH ACTIVE AND PASSIVE CONSTRUCTION ACTIVITIES OF THE WEATHER.
5. ALL SUPPLIES AND MATERIALS NECESSARY FOR IMPLEMENTING BMPs SHALL BE STORED ON SITE AND SHALL BE IMMEDIATELY AVAILABLE FOR USE. SUCH SUPPLIES AND MATERIALS SHALL INCLUDE, BUT NOT BE LIMITED TO, STORMWATER DIVERSION MULLCHING MATERIAL, SILT FENCING AND STAKES, FILTER FABRIC, ETC.
6. DURING AND AFTER RUNOFF PRODUING STORM EVENTS, CONTRACTOR SHALL MONITOR ALL EROSION CONTROL MEASURES AND SHALL PROVIDE IMPLEMENTATION AND MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES ABOVE ALL OTHERS.

**ENGINEER**

RMS - ENGINEERING CONSULTANTS, LLC  
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 JACKSONVILLE OREGON  
 541-964-9693

**NARRATIVE DESCRIPTIONS**

- EXISTING SITE CONDITIONS  
 UNPAVED PARKING LOTS, OUTSIDE STORAGE, RECREATIONAL FIELD, ROAD YARD
- DEVELOPED CONDITIONS  
 PAVED PARKING LOTS, STORM WATER REVER SYSTEM, UTILITIES, RECREATIONAL VEHICLE USE, PAVED ROAD YARD
- RECEIVING WATER BODIES  
 PORT BAIN THE PACIFIC OCEAN/COAST 100 MILES ESTUARY

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<input type="checkbox"/>	EMC	
<input type="checkbox"/>	PORT OF BROOKINGS HARBOR	
<input type="checkbox"/>	LOWER HARBOR ROAD IMPROVEMENTS, OR 97415	
<input type="checkbox"/>	KITE FIELD RV PARK	
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**INSPECTION FREQUENCY:**

- \* HOLD A PRE-CON MEETING OF PROJECT CONSTRUCTION PERSONNEL THAT INCLUDES THE EC ENGINEER.
- \* ALL INSPECTIONS MUST BE MADE IN ACCORDANCE WITH DEC 1000 PERMIT REQUIREMENTS.
- \* INSPECTION LOGS MUST BE KEPT IN ACCORDANCE WITH DEC 1000 PERMIT REQUIREMENTS.
- \* CHANGES TO THE APPROVED ESCP PLAN MUST BE SUBMITTED TO DEC IN THE FORM OF AN ACTION PLAN.

**RATIONAL STATEMENT**

A COMPREHENSIVE LIST OF AVAILABLE BEST MANAGEMENT PRACTICES (BMP) OPTIONS BASED ON DEC 1000 PERMIT APPLICATION AND ESCP PLAN IS PROVIDED TO COMPLETE THIS EROSION AND SEDIMENT CONTROL PLAN. SOME OF THE ABOVE LISTED BMPs WERE NOT CHOSEN BECAUSE THEY WERE NOT EFFECTIVE OR TOO COSTLY TO IMPLEMENT. THE ENGINEER HAS CONDUCTED VISUAL VERIFICATION AND IDENTIFIED BEST MANAGEMENT PRACTICES FOR THIS PROJECT BASED ON SPECIFIC SITE CONDITIONS, INCLUDING SOIL CONDITIONS, TOPOGRAPHIC CONSTRAINTS, ACCESSIBILITY TO THE SITE, AND OTHER RELATED CONDITIONS. AS THE PROJECT PROGRESSES AND THERE IS A NEED TO REVISE THE ESCP, AN ACTION PLAN WILL BE SUBMITTED.

**STOCKPILE SOILS**

TEMPORARY STOCKPILE LOCATIONS MAY BE ADJUSTED BY CONTRACTOR ON FIELD. CARE SHOULD BE TAKEN TO AVOID ENVIRONMENTAL DRAINAGE DRAINAGE OR OVERFLOW. TOPSOIL STRIPPIES MAY BE INCORPORATED INTO EROSION CONTROL DIVERSION BARRIERS.

STOCKPILE SHALL NOT BE PLACED WITHIN PROTECTIVE CHANNELS, SCREEN BUFFERS, EXISTING DRAINAGE WAIR, UTILITIES EASEMENT, OR RIGHT-OF-WAYS. STOCKPILE MANAGEMENT SHALL COMPLY WITH THE ESC PLAN. INACTIVE TEMPORARY STOCKPILES SHALL BE REMOVED PRIOR TO RESUMING CONSTRUCTION.

**CONSTRUCTION ACTIVITY / ESTIMATED TIME**

CLEANING	TO BE DETERMINED
GRADING	TO BE DETERMINED
MULCH INSTALL:	TO BE DETERMINED
ERECT CONSTRUCTION:	TO BE DETERMINED
FINAL STABILIZATION:	TO BE DETERMINED

**SHEET INDEX**

GENERAL NOTES	C2.0
EROSION AND SEDIMENT CONTROL PLAN	C2.1
EROSION AND SEDIMENT CONTROL DETAILS	C2.2

DRAWN BY: TAM  
 DATE: 1/7/17  
 JOB NO: 20-XXX

**C5.1**  
 EGCS  
 GENERAL  
 NOTES

## **ACTION ITEM – K**

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**DATE:** November 17, 2021

**RE:** Business Oregon General Application Special Public Works Fund, FEMA DR-4452 Mitigation and Repair

**TO:** Honorable Board President and District Board Members

**ISSUED BY:** Gary Dehlinger, Port Manager

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### OVERVIEW

- A severe storm occurred on April 6, 2019 causing enough damage in Curry County and to the Port to activate FEMA disaster relief protocol for which the Port submitted storm damage of approximately 30,000 cubic yards of sediment deposited in Basins 1 and 2. FEMA 406 Mitigation measures will provide infrastructure to reduce future storm related damages to Port facilities.
- FEMA disaster relief requires 25% matching from the applicant for the repair and mitigation costs. The Port does not have the funds required for the 25% matching.
- Business Oregon Special Public Works Fund provides matching amounts for disaster relief repair and mitigation projects. The matching amount for this repair and mitigation is \$458,934.
- Business Oregon provided a General Application for Special Works Fund, FEMA DR-4452 Mitigation and Repair, #648-14633 for the matching funds.
- The General Application requires the Board to approve the signature to submit the application.
- Resolution 2021-14 provides the documentation needed to authorize the Board President to sign and submit the application on the behalf of the Port of Brookings Harbor.
- Port legal counsel and EMC Engineers/Scientist have reviewed the documents.

### DOCUMENTS

- Draft Resolution 2021-14 Authorizing Submission of Business Oregon General Application for Special Public Works Fund, FEMA DR-4452 Mitigation and Repair, #648-14633, 1 page
- Business Oregon General Application SPWF, FEMA DR-4452 Mitigation and Repair, #648-14633, 129 pages

### COMMISSIONERS ACTIONS

- **Recommended Motion:**  
Motion to approve the draft Resolution 2021-14 Authorizing Submission of Business Oregon General Application for Special Public Works Fund, FEMA DR-4452 Mitigation and Repair, #648-14633.



**PORT OF BROOKINGS HARBOR  
CURRY COUNTY, OREGON**

**RESOLUTION NO. 2021-14**

**A RESOLUTION OF THE BOARD OF PORT COMMISSIONERS FOR THE PORT OF  
BROOKINGS HARBOR AUTHORIZING SUBMISSION OF BUSINESS OREGON  
GENERAL APPLICATION FOR SPECIAL PUBLIC WORKS FUND, FEMA DR-4452  
MITIGATION AND REPAIR, #648-14633**

**WHEREAS**, the Port of Brookings Harbor is a port district, organized and operated under the provisions of ORS Chapter 777, and has the authority to adopt resolutions; and

**WHEREAS**, a severe storm occurred on April 6, 2019 causing enough damage in Curry County and to the Port to activate FEMA disaster relief protocol for which the Port submitted storm damage of approximately 30,000 cubic yards of sediment deposited in Basins 1 and 2. FEMA 406 Mitigation measures will provide infrastructure to reduce future storm related damages to Port facilities; and

**WHEREAS**, FEMA disaster relief requires 25% matching from the applicant for the repair and mitigation costs. The Port does not have the funds required for the 25% matching.; and

**WHEREAS**, Business Oregon Special Public Works Fund provides matching amounts for disaster relief repair and mitigation projects.

**NOW, THEREFORE**, be it resolved by the Board of Commissioners of the Port of Brookings Harbor, Curry County, Oregon as follows:

1. The Port of Brookings Harbor Board of Commissioners authorizes the Board President, Richard Heap, to sign and submit on the behalf of the Port of Brookings Harbor, Business Oregon General Application for Special Works Fund, FEMA DR-4452 Mitigation and Repair, #648-14633.

**APPROVED AND ADOPTED** and made effective the same day by the Board of Port Commissioners of the Port of Brookings Harbor this 17th day of November, 2021.

**ATTEST:**

\_\_\_\_\_  
Richard Heap, President

\_\_\_\_\_  
Sharon Hartung, Secretary/Treasurer



November 9, 2021

Richard Heap, President  
Port of Brookings Harbor  
16330 Lower Harbor Rd.  
PO Box 848  
Brookings, Oregon, 97415

RE: Invitation to Apply for Special Public Works Fund, FEMA DR-4452 Mitigation and Repair,  
#648-14633

Dear Richard:

Business Oregon is pleased to invite you to submit an application for funding for the above referenced project.

Please submit the enclosed Application and the Application Supplement form(s) to our office.

We request that you complete the Application and Application Supplement within 45 days of receiving this letter.

Should you have any questions, please contact me at 503-779-3221 or e-mail to: [Ted.Werth@oregon.gov](mailto:Ted.Werth@oregon.gov) I will be your Business Oregon point of contact for this project moving forward.

Sincerely,

*Ted Werth*

Ted Werth, Regional Project Manager  
Business Oregon

Enclosures

c: Gary Dehlinger  
File

## General Application

775 Summer St NE, Suite 200  
Salem, OR 97301-1280

### Applicant

Port of Brookings Harbor  
Name

93-6013807  
Federal Tax ID Number

16330 Lower Harbor Road, Brookings, OR  
97415

P.O. Box 848, Brookings, OR 97415  
Mailing Address

Street Address

Organization Type:

City     County     Special District under  
ORS \_\_\_\_\_

Port District under  
ORS 777

Tribe

Gary Dehlinger  
Contact Name  
(Person we should contact with project questions)

Port Manager  
Title

541-254-4162  
Phone Number

541-359-3999  
Fax Number

portmanager@portofbrookingshar  
bor.com  
Email Address

**Representation** (Information may be found at [www.leg.state.or.us/findlegsltr](http://www.leg.state.or.us/findlegsltr) )

01  
Senate District Number

Dallas Heard  
Senator's Name

01  
House District Number

David Brock Smith  
Representative's Name

### Project Information

FEMA DR-4452 Mitigation & Repair, #648-14633  
Project Name: (e.g., Stayton Water System Improvements)

**Opportunity/Problem**

Briefly describe the opportunity or problem facing the applicant:

A severe storm occurred on April 6, 2019 causing enough damage in Curry County and to the Port to activate FEMA disaster relief protocol for which the Port submitted storm damage of approximately 30,000 cubic yards of sediment deposited in Basins 1 and 2. FEMA 406 Mitigation measures will provide infrastructure to reduce future storm related damages to Port facilities. FEMA disaster relief requires 25% matching from the applicant for the repair and mitigation costs. The Port does not have the funds required for the 25% matching.

**Response to Opportunity/Problem**

Briefly describe the major alternatives considered to address this opportunity or problem:

The Port would need to seek private loans for the required 25% matching and cause further debt issues.

**Detailed Project Description**

Clearly describe the proposed project work to be accomplished:

Please see Attachment "B" report from EMC Engineers/Scientists dated 5/16/2021.

**Project Work Plan**

List project activity milestones with estimated start and completion dates. Identify estimated date of first cash draw:

Activity	Estimated Date	
	Start	Completion
Joint Permit Applicant approved	Nov 1, 2021	Jan 1, 2022
Completion of construction drawings	Nov 1, 2021	Sep 1, 2022
Purchase of dredge, electric generator and piping	Jan 1, 2022	Sep 1, 2022
RFP to select project contractor	May 1, 2022	Jul 1, 2022
Grading and construction of the sediment storage area in the Commercial area	Jul 1, 2022	Sep 1, 2022
Dredging Basins 1 & 2	Oct 1, 2022	Mar 1, 2024
Basin 2 Slope Repairs	Oct 1, 2022	Mar 1, 2023
Mitigation Repairs	Mar 1, 2023	Jan 1, 2025

**Estimated First Draw Date:** Feb 1, 2022

**Project Budget**

List individual project budget line items with requested budgeted amounts by IFA and non-IFA funding sources. Change budget column labels to identify the specific requested IFA funding sources. Non-IFA sources are those funds other than those requested from IFA.

**Please be aware that the award loan amount will be subject to a less than 1% issuance fee if the loan is included in the Oregon Bond Bank. Please contact Business Oregon for additional information.**

Budget Line Item (Adjust budget items to suit the project) <i>Below are general items most used</i>	IFA Funding		Non-IFA	Total
	Source 1	Source 2	Funds	
Engineering/Architecture	\$0	\$0	\$0	\$0
Construction	458,934		1,376,800	1,835,734
Construction Contingency				0
Land Acquisition				0
Legal				0
Construction Management				0
Other (Specify)				0
Other (Specify)				0
Other (Specify)				0
Other (Specify)				0
<b>Totals</b>	<b>458,934</b>	<b>0</b>	<b>1,376,800</b>	<b>1,835,734</b>

**Note:** Attach Engineer's Cost Estimate completed within the past 6 months.

**Details of Non-IFA Funds**

Source of Non-IFA Funds	Amount	Status: C-Committed, A-Application S-Submitted, AI-Application Invited, PS-Potential Source	Dates Required Funds will be Committed and Available
FEMA/OEM	\$1,376,800	S	1-Jan-22
<b>Totals</b>	<b>1,376,800</b>		

If "Non-IFA funds" include USDA Rural Development funding that will require interim financing, please indicate the source of the interim financing.

**General Certification**

I certify to the best of my knowledge all information, contained in this document and any attached supplements, is valid and accurate. I further certify that, to the best of my knowledge:

1. The application has been approved by the governing body or is otherwise being submitted using the governing body's lawful process, and
2. Signature authority is verified.

**Check one:**

- Yes, I am the highest elected official. (e.g., Mayor, Chair or President)
- No, I am not the highest elected official so I have attached documentation that verifies my authority to sign on behalf of the applicant. (Document such as charter, resolution, ordinance or governing body meeting minutes must be attached.)

**The department will only accept applications with proper signature authority documentation.**

Signature	November 17, 2021
Richard Heap	Date
Printed Name	President
	Printed Title

**FOR BUSINESS OREGON USE ONLY**

Concept Number	Intake Approval Date
----------------	----------------------

**Project Type:**

- Planning                       Construction                       Other:
- Design                               Design & Construction

Applicant: Port of Brookings Harbor

Project Name: FEMA DR-4452 Mitigation & Repair, #648-14633

**Section I: Project Type / Acquisition / Ownership / Operation**

- A. Will the project provide the local match for an **emergency project** receiving federal disaster relief?  Yes  No

*If yes, briefly describe the emergency project activities:* Dredging, Basin slope repair and mitigation measures.

**Note:** Attach copies of the FEMA approved "Project Worksheets" as **Attachment A.**

- B. Will the project result in the restoration, rehabilitation or new construction of essential community facilities that provide support services to public health and safety, including but limited to police and fire protection, medical treatment, public utilities, transportation and auxiliary shelter facilities?  Yes  No

*If yes, explain:*

- C. What is the physical location of the project?

**16330 Lower Harbor Road and 16035 Boat Basin Road, Brookings, OR 97415**

- D. Will the applicant own the facility / improvements once constructed?  Yes  No

*If no, explain:*

- E. Will the applicant operate and maintain the facility / improvements once constructed?  Yes  No

*If no, describe:*

- F. Does the project include any acquisition of real property, including permanent easements and rights-of-way, which are directly related to or necessary for the project?  Yes  No

*If yes, describe:*

- G. Does the project include the purchase of motor vehicles or any other equipment which is essential to the project?  Yes  No

*If yes, describe:* **Remote control dredge, generator and discharge piping**

- H. Will a private entity or business have a special legal entitlement to the project? (e.g., through either a transfer of, or partnership in ownership, a lease, management contract, special user rates or development fees, or priority for use)  Yes  No

*If yes, describe:*



**Section II: Additional Project Information**

A. What is the estimated useful life of the improvements included in the project?

**50-100 years**

B. Please list the permits and regulatory authorizations needed for the project to be ready to proceed with construction and indicate whether they have been obtained or not.

Permit Type	Review Agency	Status of Approval	If pending, anticipated approval date
Joint Permit Application	USACE & ODSL	<input type="checkbox"/> Obtained <input checked="" type="checkbox"/> Pending	Jan 1, 2022
		<input type="checkbox"/> Obtained <input type="checkbox"/> Pending	
		<input type="checkbox"/> Obtained <input type="checkbox"/> Pending	
		<input type="checkbox"/> Obtained <input type="checkbox"/> Pending	

**Section III: For Drinking Water System Improvement Projects Only**

A. Water system identification number:

**Section IV: Financial Information**

A. What sources of revenue can be pledged to repay a loan?

*Note: Loan funding for all or a portion of the requested local match **may** be necessary if funding requests for local match assistance exceeds the Emergency Project grant funds available.*

**Port's understanding, FEMA declared disaster matching from SPWF is not a loan.**

B. Is other debt serviced or secured by those revenues?  Yes  No

*If yes, is the other debt described in the applicant's audit reports?*  Yes  No

**If the other debt is not described in the audit report,** refer to the specific authorization, such as an ordinance or resolution. List below and attach a copy.

Lender	Amount of Note	Year Incurred

C. Has the applicant ever defaulted on a debt?  Yes  No

*If yes, provide a complete summary of the circumstances related to the default:*

- D. Is there actual/pending litigation that could impair the applicant's ability to repay debt?  Yes  No

*If yes, describe:*

**Section V: Budget Information**

- A. Does the project budget (as included on the General Application) propose direct project management expenses?  Yes  No

*(Direct project management is defined as expenses that will be incurred that are directly related to and necessary solely to support or manage project activities and are not routine or ongoing expenses of the municipality or expenses for current staff that are already included in the municipality's adopted budget. )*

*If yes, describe how the direct project management services will be provided:*

- B. A current engineer's cost estimate must be included as **Attachment G**. Who prepared the cost estimates for the project?

*Note: To be considered current, the cost estimate must have been completed within the past 6 months.*

Name: **Jack Akin**

Title: **Owner**

Company: **EMC Engineers/Scientists, LLC**

Phone Number: **541-474-9434**

Date of project cost estimate: **May 16, 2021**

## Attachments

	<b>Attachment Description</b>	<b>For IFA Use (X Attached?)</b>
<b>Required with all applications</b>	<b>A</b> Attach a copy of the FEMA approved "Project Worksheet(s)" that are the basis for this funding request.	<input type="checkbox"/>
	<b>B</b> Map(s) showing the location of the project, including tax lots / parcels and road widths, et cetera.	<input type="checkbox"/>
	<b>C</b> If the project overlaps municipal boundaries, attach an executed copy of an intergovernmental cooperation agreement that sets out the duties and obligations of each entity.	<input type="checkbox"/>
	<b>D</b> If the applicant will own the facility and another entity will operate the facility, attach an executed copy of the operating agreement between the parties.	<input type="checkbox"/>
	<b>E</b> If available, the plans and specifications for the project.	<input type="checkbox"/>
	<b>F</b> If available, the architectural / engineering / planning work or study conducted to determine the feasibility of the proposed repairs or other improvements. The documents must be certified by a professional architect / registered engineer licensed in Oregon.	<input type="checkbox"/>
	<b>G</b> Current engineer's cost estimate (see Section 5 B)	<input type="checkbox"/>

304670

# Harbor - Basins 1 and 2

\*\*\*\*\*Version 1 Summary\*\*\*\*\*

Version 1 captures work to be completed and supersedes Version 0 SOW.

V1.1 Total volume of debris to be removed increased from 8,000 CY to 38,000 CY after detailed engineering analysis and transfer of project 110140 SOW to this project (see special note 1).

V1.2: Riprap replacement added to SOW as part of dredging work, determined necessary after detailed engineering analysis.

V1.3: Work to be completed costs have increased from \$972,299.00 to \$2,465,157.00 due to above changes.

V1.4: Include \$80,400 of transferred de-obligated funding from DR4452, project 110140.

\*\*\*\*\*

### Work to be Completed

The applicant will utilize contracts for the repairs to harbor Basins 1 and 2 to return the facility back to its pre-disaster design, function and capacity within the existing footprint.

Basin 1 GPS: 42.047097, -124.266318 through 42.044543, -124.264013

Basin 2 GPS: 42.051155, -124.268378 through 42.050387, -124.268139

### Facility Damage

1. Remove and dispose of 8,000 Cubic Yard of Sand/Soil/Mud debris from Basin 1.
2. Remove and dispose of 30,000 Cubic Yard of Sand/Soil/Mud debris from Basin 2.
3. Replace 1911 CY of riprap in Basin 2 :
  1. 542 CY of unclassified mixed riprap on East slope, 195 FT long x 5 FT wide x 15 FT deep
  2. 578 CY of unclassified mixed riprap on South Slope, 208 FT long x 5 FT wide x 15 FT deep
  3. 289 CY of unclassified mixed riprap on Transient Slope, 104 FT long x 5 FT wide x 15 FT deep
  4. 502 CY of unclassified mixed riprap on Basin 2 West Slope, 452 FT long x 5 FT wide x 6 FT deep

**Work to be Completed Total: \$2,465,157.00**

### Special Notes:

1. The actual dredging work of this project is directly associated with the dredging work of Project #110140 of DR4452OR, therefore the Engineering Services include the composite design documents for both damages. The projects are not mutually exclusive (e.g. as the sediment of the first event DR4432 is

beneath the sediment of DR4452, it technically cannot be removed until the DR4452 sediment is removed), thus the need for a combined engineering program.

**Project Notes:**

1. All site estimates for work to be completed were generated using applicant provided estimates. See attachment labelled *ST 104046 Cost Validation.xlsx* and *ST 104046 Appendix A Cost Validation Checklist.pdf*
2. As engineering design evolved, total volume of debris has become more accurate and volume totals are now 38,000 CY for projects 104046 and 110140.
3. The updated SOW includes 1911 CY of replacement riprap, determined necessary after detailed engineering analysis
4. Applicant plans to use a an in-house, small dredge system, utilizing the DragFlow DPR-120 remote controlled dredge, rigged with the EL 1204HH C Model pump system. See attached document *DR4432 & DR4452\_POBH\_Repairs, Mitigation, Exhibits DWGs and Budgets.pdf*, page 26.
5. The applicant is coordinating with US Army Corp of Engineers and Oregon Department of Public Lands regarding required permits. See attached document *DR4432\_DR4452\_Port of Brookings Harbor\_JPA\_071321.pdf*
6. All work will be completed within the applicants ROW. If staging of equipment and materials would be needed, that work will be staged within the applicants ROW.
7. Disposal of work to be completed is expected to be deposited at an acceptable location (landfill). Location will be provided by applicant once work commences.
8. All borrow, or fill must come from pre-existing stockpiles, material reclaimed from maintained roadside ditches (provided the designed width or depth of the ditch is not increased), or commercially procured material from a source existing prior to the event. For any FEMA-funded project requiring the use of a non-commercial source or a commercial source that was not permitted to operate prior to the event (e.g. a new pit, agricultural fields, road ROWs, etc.) in whole or in part, regardless of cost, the Applicant must notify FEMA and the Recipient prior to extracting material. FEMA must review the source for compliance with all applicable federal environmental planning and historic preservation laws and executive orders prior to a sub recipient or their contractor commencing borrow extraction. Consultation and regulatory permitting may be required. Non-compliance with this requirement may jeopardize receipt of federal funding. Documentation of borrow sources utilized is required at closeout.
9. Construction Date of Basin 1 is 1950s – 1960s, the construction date of Basin 2 is 1975 and the construction date of the Fuel Dock is 2004/2010.”
10. The EHP site inspection report uploaded to GM references major archeological concerns along east bank of Basin 1 and north of Basin 2 as well as some environmental concerns.
11. This project was moved to category G and qualifies for hazard mitigation funding, however the DI is still listed as category A thus this SOW is implementing an agreed-upon work-around to include the proposed Hazard Mitigation Proposal (HMP). See below.

**Hazard Mitigation Proposal (HMP)**

**GM Project # 104046**

**DI #: 304670**

**DR-4432- OR**

**HMP Date: 10/4/2021**

**Damage Description & Dimensions (DDD):**

**This permanent work project addresses dredging work and rip rap replacement following two storm events, with a total estimated repair cost of \$2,465,157. The damages occurred from the displacement of all of the materials from upslope during heavy precipitation and winter storm**

events. An engineering analysis (DR4432 & DR4452\_POBH\_Repairs, Mitigation, Exhibits DWGs and Budgets.pdf) was conducted to provide the details regarding the repairs needed and the proposed mitigation.

**Hazard Mitigation Proposal (HMP) Scope of Work**

For the purpose of erosion control to mitigate against future damages from similar events, the applicant has provided a detailed scope of work which includes resiliency measures upslope that are in keeping with Appendix J section I.B as well as a lesser cost method of repair for the damages their selves. This holistic approach of addressing the repairs and resiliency will result in mitigation that addresses the causes and source of the disaster related damages. See previously mentioned attachment for details.

**Hazard Mitigation Proposal (HMP) Cost:**

The applicant provided estimate for the mitigation is Exhibit C, found on page 11 of 105 within the engineering analysis. Due to the various approaches used in compartmentalizing the funding, the information on that estimate regarding where the funding could come from should be disregarded as no longer representing the best available information. The cost, designs, and items included remain valid. The cost of the proposed mitigation is derived previously noted attachments, for \$3,833,249. This mitigation will be performed in lieu of the predisaster repair. Therefore, the total additional cost needed for this mitigation is:  $\$3,833,249 \text{ minus } \$2,465,157 = \$1,368,092$ .

**Hazard Mitigation Ratio:**

The estimated predisaster repairs (excluding engineering) is \$2,465,157. The proposed mitigation is \$1,368,092, or 55% of the repair costs.

**HMP Feasibility & Cost Effectiveness:**

This Hazard Mitigation Proposal is cost effective in accordance with the 100% Rule, FEMA Public Assistance Program and Policy Guide (PAPPG) V3.1 and Appendix J section I.B.

**Compliances and Assurances:**

The Applicant is responsible for permits and compliance with all regulatory codes and standards for the State of Oregon and contractors and vendors. FEMA will not pay for duplication of cost between repairs and mitigation measures. If this HMP is approved to change SOW, the Applicant must apply for a change in SOW so FEMA can review to ensure program compliance.

**portmanager@portofbrookingsharbor.com**

---

**From:** SLEVIN Julie \* OMD <julie.slevin@mil.state.or.us>  
**Sent:** Tuesday, October 19, 2021 9:22 AM  
**To:** 'Jack '; portmanager@portofbrookingsharbor.com  
**Cc:** GWIN Dan \* OMD  
**Subject:** FW: DR4432/4452 - POBH: DREDGING projects #104046 & 110140  
**Attachments:** DR4432-POBH Project#104046-V1 Dredging Amendment SOW.docx

FYI

**From:** WERTH Ted \* BIZ <Ted.Werth@oregon.gov>  
**Sent:** Monday, October 18, 2021 4:45 PM  
**To:** SLEVIN Julie \* OMD <julie.slevin@mil.state.or.us>  
**Subject:** Re: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Julie,

This is very helpful. I'll be in touch once I have a chance to look at this closer and discuss with the program manager who oversees SPWF program. It should be later this week.

Thanks,  
Ted

Ted Werth  
Regional Project Manager  
503-779-3221

---

**From:** SLEVIN Julie \* OMD <[julie.slevin@mil.state.or.us](mailto:julie.slevin@mil.state.or.us)>  
**Sent:** Monday, October 18, 2021 1:33:39 PM  
**To:** WERTH Ted \* BIZ <[Ted.Werth@oregon.gov](mailto:Ted.Werth@oregon.gov)>  
**Cc:** GWIN Dan \* OMD <[dan.gwin@mil.state.or.us](mailto:dan.gwin@mil.state.or.us)>  
**Subject:** FW: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Hi Ted, per our discussion, I think a couple of weeks ago, attached is the two projects into for Port of Brookings Harbor. Does this help with POBH grant limitations?

Please let me know if you have any questions,

Julie Slevin  
503.378.2235

**From:** Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>  
**Sent:** Monday, October 18, 2021 1:28 PM  
**To:** SLEVIN Julie \* OMD <[julie.slevin@mil.state.or.us](mailto:julie.slevin@mil.state.or.us)>  
**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Johnson III, Lawrence <[lawrence.johnsoniii@fema.dhs.gov](mailto:lawrence.johnsoniii@fema.dhs.gov)>; GWIN Dan \* OMD <[dan.gwin@mil.state.or.us](mailto:dan.gwin@mil.state.or.us)>; Gregory Jackson <[gjackson@acdisaster.com](mailto:gjackson@acdisaster.com)>; Lucas Pagan <[lpagan@acdisaster.com](mailto:lpagan@acdisaster.com)>; Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>; Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>;

Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>; Talbot, Jessica <[jessica.talbot@fema.dhs.gov](mailto:jessica.talbot@fema.dhs.gov)>  
**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Hi Julie,

Attached is the updated/amended Scope-of-Work for project #104046, which describes the combined dredging work and mitigation measures of the merged projects. We trust this information will meet the requirements of OR Biz. If additional documentation is needed please let us know, at your earliest convenience. Thank you. .... Doug

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[Douglas.grant@fema.dhs.gov](mailto:Douglas.grant@fema.dhs.gov)

**From:** Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>  
**Sent:** Thursday, September 16, 2021 2:47 PM  
**To:** SLEVIN Julie \* OMD <[julie.slevin@mil.state.or.us](mailto:julie.slevin@mil.state.or.us)>; Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>; Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>; Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>  
**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Johnson III, Lawrence <[lawrence.johnsoniii@fema.dhs.gov](mailto:lawrence.johnsoniii@fema.dhs.gov)>; GWIN Dan \* OMD <[dan.gwin@mil.state.or.us](mailto:dan.gwin@mil.state.or.us)>; Gregory Jackson <[gjackson@acdisaster.com](mailto:gjackson@acdisaster.com)>; Lucas Pagan <[lpagan@acdisaster.com](mailto:lpagan@acdisaster.com)>  
**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Hi All,

Per my discussion with Julie S., I have approved the POBH Amendment Request for the Dredging projects. Business Oregon will need an explanation covering two projects consolidated into one so that the Applicant will be able to receive support from Biz Oregon in support of both.

Let me know if you have any questions.

Thank you.

L.  
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DR4519 OR PD TFL  
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FEMA Mobile 202-615-6193

**From:** SLEVIN Julie \* OMD <[julie.slevin@mil.state.or.us](mailto:julie.slevin@mil.state.or.us)>  
**Sent:** Thursday, September 16, 2021 12:34 PM  
**To:** Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>; Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>; Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>; Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>  
**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Johnson III, Lawrence <[lawrence.johnsoniii@fema.dhs.gov](mailto:lawrence.johnsoniii@fema.dhs.gov)>; GWIN Dan \* OMD <[dan.gwin@mil.state.or.us](mailto:dan.gwin@mil.state.or.us)>; Gregory Jackson <[gjackson@acdisaster.com](mailto:gjackson@acdisaster.com)>; Lucas Pagan <[lpagan@acdisaster.com](mailto:lpagan@acdisaster.com)>  
**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Hi Lee, all, do you have a write up for the scope of work that documents the combination of both projects combined into one? I just talked to OR Biz who is looking at funding the match for the Port, all OR Biz really needs is a description on



how two projects/two events have been combined into one project, this will document that this is two projects, therefore match may be able to rolled together.

**From:** Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>  
**Sent:** Thursday, September 16, 2021 11:06 AM  
**To:** Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>; SLEVIN Julie \* OMD <[julie.slevin@mil.state.or.us](mailto:julie.slevin@mil.state.or.us)>; Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>; Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>  
**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Johnson III, Lawrence <[lawrence.johnsoniii@fema.dhs.gov](mailto:lawrence.johnsoniii@fema.dhs.gov)>; GWIN Dan \* OMD <[dan.gwin@mil.state.or.us](mailto:dan.gwin@mil.state.or.us)>; Gregory Jackson <[gjackson@acdisaster.com](mailto:gjackson@acdisaster.com)>; Lucas Pagan <[lpagan@acdisaster.com](mailto:lpagan@acdisaster.com)>  
**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Thanks Doug,

Will review but wait for additional info before advancing.

Thanks.

Lee

**From:** Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>  
**Sent:** Thursday, September 16, 2021 11:04 AM  
**To:** SLEVIN Julie \* OMD <[julie.slevin@mil.state.or.us](mailto:julie.slevin@mil.state.or.us)>; Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>; Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>  
**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Johnson III, Lawrence <[lawrence.johnsoniii@fema.dhs.gov](mailto:lawrence.johnsoniii@fema.dhs.gov)>; GWIN Dan \* OMD <[dan.gwin@mil.state.or.us](mailto:dan.gwin@mil.state.or.us)>; Gregory Jackson <[gjackson@acdisaster.com](mailto:gjackson@acdisaster.com)>; Lucas Pagan <[lpagan@acdisaster.com](mailto:lpagan@acdisaster.com)>  
**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140  
**Importance:** High

ALL,

The amendment request for project#104046 (DR4432) has been prepared and is entered into Grants Manager/Grants Portal. Please feel free to review it, but not advance it in the process until we have an answer to the following issue raised by the Applicant-POBH:

**From:** Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>  
**Sent:** Monday, September 13, 2021 1:49 PM  
**To:** Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>  
**Subject:** FW: DR4432-POBH: - - RE: DR4432/Engineering-Permitting Assistance

Lee,

*Just got off the phone with Jack Akin (EMC Engineering). He said Gary D (Port Mgr) is concerned that the State supposedly has a matching fund limit per project of \$500,000; and if we consolidate the projects they might lose out on \$500,000? I told him I hadn't heard of that, but I felt he should contact Julie for clarification, and he said would and keep me in the loop. [9/16: I haven't heard back from Jack A]*

As soon as the State provides the clarification we'll know whether or not to advance this request. In the meantime, presuming the answer is "no, POBH will not lose out on \$500k", I am drafting the amendment request needed to de-obligate the \$80,400 A&E Services funding from project#110140 (DR4452), so it can be transferred to DR4432.

233

If anyone has questions, comments or other input please share with the entire group. Thanks for your help.  
..... Doug

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**From:** SLEVIN Julie \* OMD <[julie.slevin@mil.state.or.us](mailto:julie.slevin@mil.state.or.us)>  
**Sent:** Thursday, September 9, 2021 1:03 PM  
**To:** Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>; Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>  
**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Johnson III, Lawrence <[lawrence.johnsoniii@fema.dhs.gov](mailto:lawrence.johnsoniii@fema.dhs.gov)>; GWIN Dan \* OMD <[dan.gwin@mil.state.or.us](mailto:dan.gwin@mil.state.or.us)>; Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>  
**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Thank you Jordan! What you wrote below was my understanding. In regards to the 4452 to 4432, I believe deob and move to 4432 was the plan.

**From:** Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>  
**Sent:** Thursday, September 9, 2021 12:21 PM  
**To:** Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>  
**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Johnson III, Lawrence <[lawrence.johnsoniii@fema.dhs.gov](mailto:lawrence.johnsoniii@fema.dhs.gov)>; GWIN Dan \* OMD <[dan.gwin@mil.state.or.us](mailto:dan.gwin@mil.state.or.us)>; SLEVIN Julie \* OMD <[julie.slevin@mil.state.or.us](mailto:julie.slevin@mil.state.or.us)>; Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>  
**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Hey Jack/All, I spoke with Lee again this morning and I think we're all on the same page. We will be requesting an amendment for 4432 and that is the one that we will capture all the costs, and mitigation in.

The only question that remained is regarding the funding already obligated under 4452 and whether or not we would need to write an amendment to move those funds from one disaster to another, or choose to leave them where they are. My opinion was that we would need to de-obligate the funds from 4452 and move them over to 4432 but I am not the Region and that would be a question for Steve, and the fabulous Region 10 closeout team.

Thank you,

Jordan Leigh  
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**FEMA**

**From:** Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>  
**Sent:** Wednesday, September 8, 2021 4:34 PM  
**To:** Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>  
**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Johnson III, Lawrence <[lawrence.johnsoniii@fema.dhs.gov](mailto:lawrence.johnsoniii@fema.dhs.gov)>; GWIN Dan \* OMD <[dan.gwin@mil.state.or.us](mailto:dan.gwin@mil.state.or.us)>; SLEVIN Julie \* OMD <[julie.slevin@mil.state.or.us](mailto:julie.slevin@mil.state.or.us)>; Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>  
**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Good Afternoon – Jordan -

To weigh in on all this – it appears that all the necessary information is available and was attached on 7/14/21 under 4432 project #104046. There were 3 attachments total that were added.

Therefore – it seems the operative question is – what is the SOP for initiating a version on an obligated project for an applicant that has not had an RTM? Does it need to be a formal amendment request from the Grantee, or is there some more direct way that we could proceed forward on this? Can you advise or redirect to someone who could advise? I think we know where we want to go – we just need some direction on how to go about getting there.

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**FEMA**

**From:** SLEVIN Julie \* OMD <[julie.slevin@mil.state.or.us](mailto:julie.slevin@mil.state.or.us)>  
**Sent:** Tuesday, September 7, 2021 2:51 PM  
**To:** Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>; Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>  
**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>; Johnson III, Lawrence <[lawrence.johnsoniii@fema.dhs.gov](mailto:lawrence.johnsoniii@fema.dhs.gov)>; GWIN Dan \* OMD <[dan.gwin@mil.state.or.us](mailto:dan.gwin@mil.state.or.us)>  
**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Thanks Jordan for update! we should have all the information ready, to include cost estimate to pre-disaster. I believe its all been uploaded into GP? Should we have a call to discuss?

**From:** Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>  
**Sent:** Tuesday, September 7, 2021 11:52 AM  
**To:** Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>

**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>; Johnson III, Lawrence <[lawrence.johnsoniii@fema.dhs.gov](mailto:lawrence.johnsoniii@fema.dhs.gov)>; SLEVIN Julie \* OMD <[julie.slevin@mil.state.or.us](mailto:julie.slevin@mil.state.or.us)>; GWIN Dan \* OMD <[dan.gwin@mil.state.or.us](mailto:dan.gwin@mil.state.or.us)>  
**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Good morning,

We at the CRC have not received the versions for either projects yet in the CRC. We are unable to work a project until it reaches us at the CRC. My assumption is that both projects would need to be versioned, one to withdraw the A/E funding, and the other for validating the cost and writing up the project.

Please let me know if that is correct. In addition please let us know when we may see the versions at the CRC so we may begin working on them.

Thank you,

Jordan Leigh  
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**From:** Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>  
**Sent:** Tuesday, September 7, 2021 10:56 AM  
**To:** Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>  
**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>; Johnson III, Lawrence <[lawrence.johnsoniii@fema.dhs.gov](mailto:lawrence.johnsoniii@fema.dhs.gov)>; SLEVIN Julie \* OMD <[julie.slevin@mil.state.or.us](mailto:julie.slevin@mil.state.or.us)>; Gwin, Dan <[Dan.Gwin@state.or.us](mailto:Dan.Gwin@state.or.us)>; Gregory Jackson <[gjackson@acdisaster.com](mailto:gjackson@acdisaster.com)>; Lucas Pagan <[lpagan@acdisaster.com](mailto:lpagan@acdisaster.com)>  
**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140  
**Importance:** High

Good morning Jordan,

Earlier I left you a voice message inquiring about the progress on the cost validation of these merged projects. In this morning's daily huddle, Julie Slevin (State Public Assistance Officer) mentioned that the Applicant's Consulting Engineer, Jack Akin, had contacted her regarding the project status. She asked that Greg Jackson (State OEM rep) and I respond to Mr. Akin as soon as possible.

While Region 10 determines how the financial conditions are processed, the CRC cost estimate validation is underway as I understand your August 31<sup>st</sup> email, correct? Do you have an approximate timeline for concluding this step? Do your specialists need any additional information to continue? Would the R10 financial directives have to be in place before you can advance the project to the next steps? Thanks for updating the group. .... Doug

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**From:** Grant, Douglas  
**Sent:** Tuesday, August 31, 2021 2:08 PM  
**To:** Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>  
**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>; Ducote, David <[david.ducote@fema.dhs.gov](mailto:david.ducote@fema.dhs.gov)>; Ntagbu, Anthony <[anthony.ntagbu@fema.dhs.gov](mailto:anthony.ntagbu@fema.dhs.gov)>; Johnson III, Lawrence <[lawrence.johnsoniii@fema.dhs.gov](mailto:lawrence.johnsoniii@fema.dhs.gov)>  
**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Jordan,

Thanks for the heads up. I'll request some input and direction from Steve; as we don't want this complex project to hit any approval snags once you finish developing it. .... DCG

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**From:** Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>  
**Sent:** Tuesday, August 31, 2021 1:47 PM  
**To:** Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>  
**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>; Ducote, David <[david.ducote@fema.dhs.gov](mailto:david.ducote@fema.dhs.gov)>; Ntagbu, Anthony <[anthony.ntagbu@fema.dhs.gov](mailto:anthony.ntagbu@fema.dhs.gov)>; Johnson III, Lawrence <[lawrence.johnsoniii@fema.dhs.gov](mailto:lawrence.johnsoniii@fema.dhs.gov)>  
**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Hi Doug, since I am not the Region I cannot determine if funding should remain or be de-obligated for the 4452 project. My recommendation would be to consolidate the two costs on 4432 since that is the project we are moving forward with. But again the Region would need to determine how they would like to handle the obligated funds.

Thank you,

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# FEMA

**From:** Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>  
**Sent:** Tuesday, August 31, 2021 1:30 PM  
**To:** Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>  
**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>; Ducote, David <[david.ducote@fema.dhs.gov](mailto:david.ducote@fema.dhs.gov)>; Ntagbu, Anthony <[anthony.ntagbu@fema.dhs.gov](mailto:anthony.ntagbu@fema.dhs.gov)>; Johnson III, Lawrence <[lawrence.johnsoniii@fema.dhs.gov](mailto:lawrence.johnsoniii@fema.dhs.gov)>  
**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Hi Jordan,

It's been a couple of weeks already, so I thought I'd check in with you to see how the project merger is going. Since the original A&E projects have been obligated, I am not able to track the subsequent 'version' developments. Thanks for an update. .... Doug

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 PDMG – Public Assistance  
 DR4432OR  
 732-804-9239  
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**From:** Grant, Douglas  
**Sent:** Monday, August 16, 2021 3:31 PM  
**To:** Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>  
**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>; Ducote, David <[david.ducote@fema.dhs.gov](mailto:david.ducote@fema.dhs.gov)>; Ntagbu, Anthony <[anthony.ntagbu@fema.dhs.gov](mailto:anthony.ntagbu@fema.dhs.gov)>  
**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Many thanks, Jordan. Please let me know if I need to do anything within GM to have the DR4452 A&E costs withdrawn and reallocated to DR4432. .... Doug

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**From:** Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>  
**Sent:** Monday, August 16, 2021 3:18 PM  
**To:** Grant, Douglas <[Douglas.Grant@fema.dhs.gov](mailto:Douglas.Grant@fema.dhs.gov)>  
**Cc:** Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>; Ducote, David <[david.ducote@fema.dhs.gov](mailto:david.ducote@fema.dhs.gov)>; Ntagbu, Anthony <[anthony.ntagbu@fema.dhs.gov](mailto:anthony.ntagbu@fema.dhs.gov)>  
**Subject:** RE: DR4432/4452 - POBH: DREDGING projects #104046 & 110140

Good afternoon Doug,

We should be good to go on these projects. I spoke with our senior leadership. We should be able to capture the entire project costs on the one project in DR 4432, which will simplify the mitigation and scope. We will use project notes to reference the compounding damages.

I believe the remaining project under 4452 will need to have the A/E costs withdrawn and captured instead under the project on 4432.

Thank you,

Jordan Leigh  
Lane Manager | Consolidated Resource Center, West | Public Assistance Division  
Mobile: (202) 856-5928  
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**fema.gov**



**FEMA**

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**Sent:** Monday, August 16, 2021 3:06 PM  
**To:** Leigh, Jordan <[jordan.leigh@fema.dhs.gov](mailto:jordan.leigh@fema.dhs.gov)>  
**Cc:** Slevin, Julie <[Julie.Slevin@state.or.us](mailto:Julie.Slevin@state.or.us)>; Gwin, Dan <[Dan.Gwin@state.or.us](mailto:Dan.Gwin@state.or.us)>; Lucas Pagan <[lpagan@acdisaster.com](mailto:lpagan@acdisaster.com)>; Gregory Jackson <[gjackson@acdisaster.com](mailto:gjackson@acdisaster.com)>; Michaels, Steven <[Steven.Michaels@fema.dhs.gov](mailto:Steven.Michaels@fema.dhs.gov)>; Marusin, Lee <[lee.marusin@fema.dhs.gov](mailto:lee.marusin@fema.dhs.gov)>; McCartney, Scott <[Scott.Mccartney@fema.dhs.gov](mailto:Scott.Mccartney@fema.dhs.gov)>; Kerschke, William <[William.Kerschke@fema.dhs.gov](mailto:William.Kerschke@fema.dhs.gov)>; Malone, Jack <[Jack.Malone@fema.dhs.gov](mailto:Jack.Malone@fema.dhs.gov)>; Ducote, David <[david.ducote@fema.dhs.gov](mailto:david.ducote@fema.dhs.gov)>; Ntagbu, Anthony <[anthony.ntagbu@fema.dhs.gov](mailto:anthony.ntagbu@fema.dhs.gov)>  
**Subject:** DR4432/4452 - POBH: DREDGING projects #104046 & 110140  
**Importance:** High

Good afternoon Jordan,

Thanks for conferencing with Lee and me late last week, regarding the two above-referenced Port of Brookings Harbor dredging projects. Under the two initial A&E v0s, the Applicant's engineering design was completed and the Joint Permit Application (JPA) was submitted to the USACE. For detailed information, please refer to the design and permit documentation uploaded July 14, 2021 into Grants Manager under DR4432OR-project #104046 – Dredging. As we understand the process, the next step for the CRC would be to complete cost estimates to establish the Version 1s.

As discussed, per the full initial project descriptions, the two projects are not independent of each other, and the current design and permit documents reflect this. As well, the documents identify substantial mitigation measures needed to secure the repair works and prevent future similar disaster conditions. The State/Recipient has requested that we now combine the scope and costs of these into the one DR4432 project#104046, so that project recovery to pre-disaster conditions and 406 mitigation measures can be addressed in total. Due to the upcoming, short annual dredging allowable work window we are requesting the CRC to expedite the GM processes as much as possible so that hopefully, the EHP and Mitigation activities are concluded in time for the Applicant to initiate the dredging operations early this Fall [note: this window is only from October 2021 thru March 2022].

Thanks for undertaking the next steps towards finalization of the comprehensive project. Please let us know if we need to provide any additional information or documentation. .... Doug

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5/16/21

Gary Dehlinger  
Port Manager  
Port of Brookings Harbor  
Brookings, OR 97477

## Scope of Work for FEMA 4432, 4452

### PA-10-OR-4432

Title 104046-Dredging, Application No. PA-10-OR-4432 (4432) is assigned a period of performance beginning May 2, 2019. The Subgrant Application proposes to repair damages as a result of the February 23<sup>rd</sup> – 26<sup>th</sup> severe storms that engendered landslides and deposited debris throughout the Port of Brookings Harbor, and included the shallowing of key marine vessel moorage, the destabilization of embankments (particularly along the West Basin 2 wall), and the accumulation of sediment beneath docks near the west embankment of Basin 2.

The sediment accumulating beneath the docks caused them to rest on the mudline beneath during low tides, causing damage to the docks. Landslides that occurred during the storm along the Basin 2 west embankment covered previously existing riprap along areas identified as Sites 1, 2 and 3, and revealed previously buried riprap in areas along embankment between these three sites. 4432 as it was proposed was purposed to remove sediment that had accumulated from the storm. The sediment volumes, about 7500 yd.<sup>3</sup> in Basin 2 and 500 yd.<sup>3</sup> in Basin 1, were estimated from comparisons of recent, sequential bathymetric surveys. Sediment migrated into identified areas of the Port basins via wild fire-generated material from the Chetco River, overtopping stormwater along the south and west embankments in Basin 2 and along the west and north Ice House Inlet embankments, and from pore water from the embankment walls themselves.

### Connection with Application Title: 110140 - Port Dredging, Application Number: PA-10-OR-4452

Noted in the Special Notes of the 4432 Application is that the sediment issues and solutions associated with 4452 are inextricably connected to those of 4432.

Engineering determinations, including comparative bathymetric surveys, found that about 15,500 yd.<sup>3</sup> of sand/soil/mud debris had accumulated in Basin 1, and about 12,500 yd.<sup>3</sup> of the same accumulated in Basin 2 as a result of the April, 2019 storm.



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These two events were back to back and overlapping with respect to hydrographic data, as it would be noted that the rising limb of the April flows would overlap the falling limb of February flows, creating a “one- two punch” on vulnerable Port locations, so that the second event in April, 2019 created more damage than the first event in February.

Completing these two projects (4432 and 4452) as one provides not only logical, but economic benefit, in that the duplication of engineering, permitting and mobilization/demobilization of equipment required for both of these projects, as well as for any proposed mitigation actions, can be averted.

As it now stands, these two projects have each been separated by FEMA into two subprojects, (Phase 1 and Phase 2) the first of which is the engineering and permitting functions necessary to assess, design and permit both 4432 and 4452. \$39,600 was assigned to 4432 and \$80,400 was assigned to 4452 for the engineering/permitting Phase.

The two projects (4432 and 4452) would be accomplished simultaneously, saving several hundred thousand dollars. Thereby the preliminary estimated cost for dredging the 38,000 yd.<sup>3</sup> is \$1,770,000. .

The Work Orders 47755 and 45060 were filled and submitted by the Port describe the dredge volumes with attached bathymetric and engineering documentation, provided after the 9/20/2019 FEMA Site Inspection.

Engineering estimates place the budget close to the original at **\$1,790,000**, as itemized in the attached **EXHIBIT A – Dredging**.

### **Damage #304676; Basin 2 - Slope Failure and Scope of Work**

The severe storm deposited a mixture of sand/soil/mud within the harbor. The debris caused a loss of soil cohesion in the slopes and steep embankments of the Harbor. Previously buried toe slabs and rocks meant to armor and help support the steep overlying embankment are now revealed, particularly along the west side of Basin 2.

Cause of Damage: The severe storm deposited a mixture of sand/soil/mud within the harbor. The debris caused a loss of soil cohesion in the slopes and steep embankments of the Harbor. Previously buried toe slabs and rocks meant to armor and help support the steep overlying embankment are now revealed, particularly along the west side of Basin 2. The erosive mechanism is described in more detail below in the section named **Storm and Erosion Processes**.



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Damage Description: Primary damages to Port embankments from 4432 and 4452 Disasters were observed and have been recorded in Basin 2, the south basin of the Port of Brookings Harbor. Generally, riprap repair is the most economical repair method for these slopes.

On the 2 East Slope, 542 CY of unclassified mixed riprap, 195 FT long x 5 FT wide x 15 FT deep would be required.

On the South Slope, 578 CY of unclassified mixed riprap, 208 FT long x 5 FT wide x 15 FT deep would be required.

On the Transient Slope, 289 CY of unclassified mixed riprap, 104 FT long x 5 FT wide x 15 FT deep would be required.

On the Basin 2 West Slope, 502 CY of unclassified mixed riprap, 452 FT long x 5 FT wide x 6 FT deep would be required.

The measurements for the embankment are based on applicant provided engineering information.

The unitized engineering budget for the riprap repair is **\$675,157**, as itemized on **EXHIBIT A - Slope Repairs**.

The scope of work for Slope Repairs is herein proposed to be revised, replacing partial and therefore vulnerable small repair slopes, some of which (east and transient) are more stable and of lower priority, with the recommended, continuous repair of the west and south slopes of Basin 2. Volumes of riprap needed remain unchanged.

The unitized total engineering budget for the revised scope of work is presented on the attached **Exhibit A - FEMA Repairs** to pre-disaster Conditions is therefore **\$2,465,157**. The engineered drawings showing the Slope Repairs are attached as files named **Slope Repairs DWG - West Basin 2 Wall**, and **Slope Repairs DWG - South Basin 2 Wall**.

### **Proposed Lower Cost Dredging Alternative, and Scope of Work**

A Feasibility Study was produced for the Port of Brookings Harbor, investigating dredging alternatives. The Study was summarized in a PowerPoint Presentation to the Port of Brookings Harbor Staff and Board of Commissioners. A trimmed version to reduce file size) of the Presentation, with videos, disposal, case study, maintenance and permitting requirements removed, is attached as **EXHIBIT D**.



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The Study was generated by the growing concerns about sedimentation in the harbor that is being accelerated by Chetco wildfire erosion. The Study investigated the feasibility of implementing an in-house maintenance dredging program and operation at the Port, in comparison to other dredging alternatives. The analyses included barge and scow, hydraulic suction dredging, mechanical, or clamshell dredging; disposing of sediments upland via storage piling on land, or other out-of-water beneficial or non-beneficial uses such as trucking to a more distant disposal area (e.g. landfill or private property), in-water, including ocean disposal, beach nourishment, flow-lane and tidal/intertidal storage, all evaluated via data and experience.

A continuous reduction in the availability of safe moorage due to shoaling is occurring at the Port. In order to focus on solutions that make sense, a these options were considered in the Study. Some have been reviewed in the past and have been determined to be too expensive, cumbersome and/or unpredictable. Overall budgetary constraints, primarily caused by high dredging costs, limit the Port's ability to maintain its moorage. Funds for necessary paving and stormwater control that would otherwise be implemented to protect the duration of the Port embankment repairs have instead been allocated to the maintenance of navigable depths.

In order to construct a more permanent hardening of these embankments, and to provide remedy against future predicted sediment flows generated by the Chetco wildfires, the Port presents an alternative that could assist the Port to respond, not only to sediment from the 2019 disasters, but also to increasing sediment, already observed (see attached **EXHIBIT E**) shoaling increases.

The dredging costs for this lower cost alternative is **\$1,192,174**, reduced \$597,826 from that of the original dredging method proposed.

This alternative, additional to the estimated savings, reduces the Port's vulnerability to damages from future, predicted shoaling. Budget details for the Lower Cost Alternative are presented in the attached **EXHIBIT B**. Note that the Total Project cost in **EXHIBIT B** of **\$1,717,331** includes the **\$675,157** for Slope Repair.

Preliminary drawings showing the proposed Lower Cost Alternative, are attached, files entitled **Sediment Storage - Proposed Dredging Alternative DWGS** and **Equipment Storage-Proposed Dredging Alternative DWGS**, which show the proposed Scopes of Work.

#### **Public Assistance 406 Mitigation Funding Request, and Scope of Work**

The Port proposes that the Public Assistance Program and Policy Guidelines (V3.1), Appendix J, 1.B, enlists the mitigation of the erosion threat to be cost effective, as described below. 100% of the Total Repairs budget for 4432 (**\$949,464**) and 100% of the Total Repairs budget for 4452 (**\$917867**).



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The mitigation funding would be used in part to extend paving from the Sediment Storage access road and work area in the Commercial Area, shown in the drawings with file name **Sediment Storage - Proposed Dredging Alternative DWGS**, southward to the presently unprotected embankments adjacent to the commercial receiving docks and Ice House Inlet, shown in the drawings with file name **Mitigation of Paving to Commercial Embankments DWGs**.

The mitigation funding would also be used in part to extend paving from the Equipment Storage access and work area in the Boatyard, shown in the drawings with file name **Equipment Storage-Proposed Dredging Alternative DWGS**, north and westward to the presently unprotected embankments adjacent to the Boatyard which is the south Basin 2 wall, shown in the drawings with file name **Mitigation of Paving to Boatyard Embankments DWGs**.

The last portion of mitigation funding would be used to protect the west part to extend paving from the Equipment Storage access and work area in the Boatyard, shown in the drawings with file name **Equipment Storage-Proposed Dredging Alternative DWGS**, north and westward to the presently unprotected embankments adjacent to the Boatyard which is the west wall of Basin 2, and the most impacted embankment at the Port. This proposed project shown in the drawings with file name **Mitigation of Paving to Basin 2 West Embankment DWGs**.

Although it can be seen that an intended use for this pavement is as an RV area, it is herein underscored that no infrastructure (buildings, water lines, electric service, sewer lines or connections, etc.) are included in this budget. The paving shown will effectively cut off surface stormwater flows, and intercept 85% of the water seeping into permeable soils.

### **The Need for Proposed Mitigation**

It is evident that three recurring factors (1. Existing unstable embankments; 2. High winds and severe winter storms and 3. Increased erosion and sediment migration do to the Chetco wildfires) will continue to degrade and block future Port operations. The recurrence of these factors is documented by, among other events and repairs, FEMA repairs that have occurred at the Port of Brookings Harbor in the last 10 or 11 years. These recurrences have been presented in the Benefit/Cost Analyses, produced within the framework of Version 6.0.0 of Build 20200819-1933, attached as **EXHIBIT F**. The following analyses the erosion processes occurring along the south and west embankments of Basin 2, and the exposed embankments adjacent to the commercial receiving docks and Ice House Inlet.



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## Storm and Erosion Processes

Contributing factors to embankment failure and subsequent sediment accumulation, and associated Port dock damages, are high winds and storm-generated erosion from embankment overtopping (stormwater flows that combine into streams and flow over the top of embankments, scoring and weakening the grade) and pore water (water seeping into permeable landings and, via hydraulic head, breaking through side banks, accelerating embankment erosion. Paving these landings and controlling stormwater flows along the west and south Basin 2 walls, and the Ice House Inlet commercial areas, would provide permanent protection to the Port.

## Stormwater Flow Volumes

Rainfall at the Port of Brookings Harbor averages 83.5 inches/year, 2.2 times the national average. Of the 106.2 days in a given year that rain falls at the Port, nearly falls between late September and early to mid-April of each year. An affected landing zone of 50 – 100' in width, borders the Port Basin shorelines. This margin covers a footprint of about 734,500 ft.<sup>2</sup>.

Along that total area about 117.34 acre feet (5,111,473 ft.<sup>3</sup>) of rain water flows over or infiltrates along the approximately 5800 foot long Port Basin shoreline.

## Affected and Relatively Non-affected Embankments

The margin areas along the embankments of the north and east of Basin 1 are paved, and the stormwater in those areas is controlled by catch basin and piping systems. On the west side of Basin 1 is a heavy riprap jetty. A couple hundred feet of the north end of the west Basin 2 landings are also paved and stormwater is similarly managed, as that area is occupied by the US Coast Guard. Much of the landing area approaching the Boatyard on the east side of Basin 2 has been paved and is equipped with stormwater catch basins and piping. The landing area margin above and including the fueling supply and Fuel Dock have recently been paved, and catch basins and piping installed.

This was done because of the recent failure of the Dock Access Pad, which was falling westward into Basin 2, due to the same erosive mechanisms described in this section. The concrete pad was removed, the area above the pad embankment (about 1300 ft<sup>2</sup>) was paved and two catch basins and connecting underground piping placed.

Most of the approaching landing between the Fuel Dock area and the Boatyard area along the east side of Basin 2 are more gradually sloped and erosion due to stormwater infiltration and overtopping are of much less concern to the Port.

Concerns with respect to accelerated erosion therefore remain at Port Basin shorelines surrounding the Commercial Receiving Dock areas, the Icehouse Inlet and the Basin 2 south and west embankments.



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Accelerated erosion from stormwater overtopping and infiltrating the Commercial Receiving Dock and Icehouse Inlet areas are not directly attributable to the 2019 February and April damages (4432 and 4452), but are caused by the erosive mechanisms described in this section.

### Damage Process

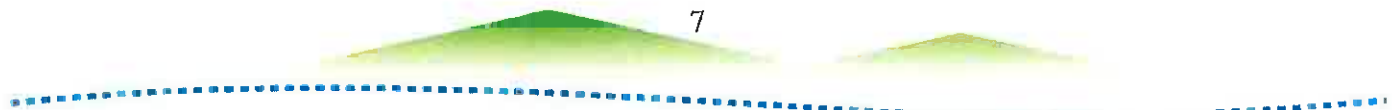
Existing riprap has been buried or unraveled, and embankment cave-ins have, as a result of these two back-to-back events, occurred and continue to occur along the approximate 1300 linear feet of exposed embankment along the south and west Basin 2 walls.

The average soil permeability coefficients (using C.I.A. ground surface classifications) of the landings approaching these embankments is about 0.4, and so approximately 40% precipitation on the landings affecting these embankments (about 352.5 ft.<sup>3</sup> /linear foot/season) sinks into the ground and joins the high groundwater flows during storm season, found by average piezometric data to be at about 8 foot below ground surfaces.

This excess water works its way by pore pressure (8 feet head or greater) at elevations of 8 to 10 feet from top of bank and erodes the base material along these embankments. The remaining 60 percent (about 529 ft.<sup>3</sup> /per linear foot/season) overtop the embankment on these unpaved areas, scoring and weakening the embankment structure.

The above would not be enough data to guide remediative design, unless augmented by duration data. This data is available via the Rainfall Intensity-Duration-Recurrence Interval (RDI) Curves (these can be obtained from the ODOT Manual, Appendix A, Zone 1).

There it can be seen that rainfall often occurs in the area with RDI coefficients of 1 for about 60 minutes, and as high as 4 for five minute intervals. Such coefficients, using classical stormwater flow calculations result in 4 to 16 cubic feet per second over the embankments for durations ranging from 5 minutes to an hour. The narrow margin lengths mean that concentration times are nearly instantaneous. This data represents a small winter storm at the Port. Major storms, such as the ones that occurred in April, 2019, last for days, with stormwater flows that range as described. High embankments of non-cohesive soils (sand) that are margined with permeable soils are not well protected against such stormwater flows, often driven by high (60 – 100 mph) winds.





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## Stormwater Contamination

On a side note, natural, commercial and industrial releases of state and federally regulated hazardous constituents have, via stormwater sampling and laboratory analysis, been found to be carried to measured monitored stormwater outfalls during winter storm events.

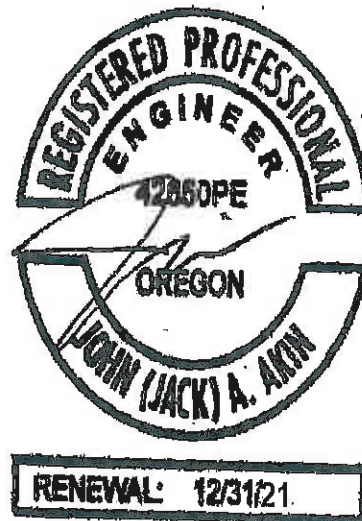
Engineering and Port management investigations have concluded that containment and encapsulation of landings and presently eroding surfaces, and embankment stabilization, as provided by stormwater catch basin/piping and paving, would not only permanently stabilize slopes and harden the Port's infrastructure against overtopping and pore water erosion, but would also provide the added benefit of protecting the public health and environment, including ESA-listed species, from excessive contamination from regulated substances.

All stormwater data reports (DMRs) showing the exceedances are available upon request.

Therefore the proposed mitigation would provide the additional benefit to effectively reduce soil-borne contaminants presently being released into the waters of the US/State.

Sincerely

Jack (John) Akin, MS, PE, IC, HMS, CAI  
EMC-Engineers/Scientists, LLC





**EXHIBIT A - FEMA 4432 AND 4452 REPAIRS**

Dredging	Equipment Mobe/Demobe, and Settling Basin	Trucking and Disposal \$/cy	Hydraulic Dredging, \$/cy	Volume in cy	Pipe Cost, 10" SDR 21 HDPE, 3000 ft \$14/ft	Dredging Costs
FEMA 4432	190,000	25	16	8,000	42000	560000
FEMA 4452	0	25	16	30,000	0	1230000
<b>TOTAL BUDGET</b>						<b>1790000</b>

Slope Repairs	LS Equipment Mobe/Demobe	\$/sf Excavation, Erosion Control	\$/cy Move, Mix, Place, Compact	\$/cy Purchase & Deliver Riprap	\$/cy Place Riprap	Fabric \$/sf
All Slopes- #304676	65000	2.25	97	102	35	0.65
\$/cy Base Rock Purchase, Delivery and Placement	Volume of Base Rock, cy	Area of Erosion Controlled, sf	Volume Soil/cy	Volume Riprap cy	Area Fabric, sf	
140	1010	28700	1250	1911	32500	
Excavation and Erosion Control Total	Move, Mix and Compact Total	Riprap Purchase and Deliver Total	Riprap Placement Total	Fabric Total	Base Rock Total	TOTAL BUDGET
64575	121250	194922	66885	21125	141400	<b>675157</b>

Engineering/Permitting	<b>Slope Repairs Total</b>	<b>675157</b>	<b>Dredging Total</b>	<b>1790000</b>	<b>PROJECT TOTAL</b>	<b>2465157</b>
120000						

**EXHIBIT B - FEMA 4432 AND 4452 REPAIRS, Lower Cost Alternative**

Dredging	120 HP Electric Dredge, Training, Shipping	Trailer-Mounted Generator, Shipped	3000 ft. 8" Dia. HDPE Pipe, \$4/ft.	Volume in cy	LABOR: per 300 cy/dy, 2600 labor-hrs total reqd., @ \$20/hr	Dredging Costs
FEMA 4432	230,000	60000	12000	8,000	11200	321,200
FEMA 4452	0	0	0	30,000	42000	72,000
<b>Totals</b>						<b>393200</b>
Access & Work Areas	Coverage, sf	\$/cy Excavation, Grading	\$/sf Subgrade Compaction	\$/cy Mixed Aggregate for Subbase, placed and compacted	\$/Ton Asphalt, Placed	\$/cy Concrete
Sediment Storage	37250	20	0.5	50	125	130
Equipment Storage	10750	20	0.5	50	125	130
#/Specified Catch Basin, ea	\$/ft Curb & Gutter, Labor	Cut/Fill Volumes, cy	Volume of Sub-base and Base Rock, cy	Volume of Asphalt, Tons, 3" Thick	Length of Curb & Gutter, ft	12" SW Pipe Installed/ft.
3000	32	3290	1150	745	1911	25
3000	32	600	332	215	65	25
SW Pipe Length, ft	No. Catch Basins	SW System Total	Grading Total	Sub-Grade Compaction Total	Aggregate Total	Asphalt Total
800	4	32000	65800	18625	57485	93125
100	1	5500	12000	5375	16590	26875
Curb & Gutter Total	\$/sf Sediment Storage Wall, with footing	Sediment Storage Wall Area (L X 3' H), sf	Sediment Storage Wall Total	16' X 16' X 45' Prefab Equipment Storage Bldg, Steel	Engineering & Permitting	Riprap Wall (See EXHIBIT A)
72629	30	3300	99000	0	39,600	0
2470	30	0	0	21500	80,400	675157
Repair of Damaged Sidewalk from West & South Wall Excavations	PROJECTS	TOTAL BUDGET	TOTAL REPAIRS-LOWER COST ALTERNATIVE		1867331	
150000	FEMA 4432	949464				
	FEMA 4452	917867				

**EXHIBIT C - FEMA 4432/4452 MITIGATION, Assuming Implementation of the Lower Cost Alternative**

Access & Work Areas	Coverage, sf	\$/cy Excavation, Grading	\$/sf Subgrade Compaction	\$/cy Mixed Aggregate for Subbase, placed and compacted	\$/Ton Asphalt, Placed	\$/cy Concrete
Commercial Area	101815	20	0.5	50	125	130
Boatyard	93750	20	0.5	50	125	130
Kite Field RV Area	100200	20	0.5	50	125	130
\$/Specified Catch Basin, ea	\$/ft Curb & Gutter, Labor	Cut/Fill Volumes, cy	Volume of Sub-base and Base Rock, cy	Volume of Asphalt, Tons, 3" Thick	Length of Curb & Gutter, ft	12" SW Pipe Installed/ft.
3000	32	12800	3142	2036	1100	25
3000	32	2500	2894	1875	1200	25
3000	32	11333	887	575	1500	25
SW Pipe Length, ft	No. Catch Basins	SW System Total	Grading Total	Sub-Grade Compaction Total	Aggregate Total	Asphalt Total
3200	5	95000	256000	50908	157122	254538
1500	4	49500	50000	46875	144676	234375
1500	4	49500	226660	50100	84367	71875
Curb & Gutter Total	TOTAL BUDGET	PROJECTS	\$ Mitigation	TOTAL BUDGET FOR PROPOSED MITIGATION, ADDITIONAL TO TOTAL REPAIRS		
41807	855374	4432	1110544			1965918
45607	571033	4452	855374			
57009	539511					
<b>TOTAL BUDGET FOR PROPOSED REPAIRS, AND FEDERAL/STATE MITIGATION</b>		<b>3,833,249</b>	EMGP Request		406-4432	406-4452
			98,587	Mitigation	949464	917867
			4452-EMGP	Repair	949464	917867
			1,934,321	TOTAL/Project	1898928	1835734
				<b>TOTAL</b>	<b>3734662</b>	

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# **EXHIBIT D – POWER POINT PRESENTATION**

*(Videos and Other Sections Removed)*

# A Feasibility Study Was Done for the Port

## **IN-HOUSE DREDGING: FEASIBILITY STUDY**

By Jack Akin, MS, PE, IC, HMS, AI

For

**Port of Brookings Harbor**  
**Gary Dehlinger, Port Manager**  
**Travis Webster, Harbormaster**

## In Summary

This study investigated the feasibility of implementing an in-house maintenance dredging program and operation at the Port, in comparison to other dredging alternatives.

A continuous reduction in the availability of safe moorage due to shoaling is occurring at the Port. In order to focus on solutions that make sense, a number of options have been considered in the Study. Some of these options have been reviewed in the past and have been determined to be too expensive, cumbersome and/or unpredictable.

Barge and scow, hydraulic suction dredging, mechanical, or clamshell dredging; disposing of sediments upland via storage piling on land, beach nourishment, or other out-of-water beneficial or non-beneficial uses, trucking to a more distant disposal area (e.g. landfill or private property), or in-water, including ocean disposal, beach nourishment, flow-lane and tidal/intertidal storage were evaluated via data and experience.

For the purposes of comparison these dredging and disposal options use a volume of 25,000 cubic yards of sediment.



Barge and scow dredging has been found to be both expensive and impractical, primarily due to considerations of navigability and availability. The standard barge may be as large as 200-foot long and 50-foot wide, with a 12-deep scow. Such a barge would be outfitted with appropriate duty spuds for anchoring and stability once it is in the desired location. The spuds on the barge must be of sufficient length allowing it to anchor itself in harbor depth of water. Out of the USACE's most recent abstract of offers for the barge and scow dredging of several port locations nearby, mobilization and demobilization alone, depending upon the selected sediment placement location, varies in the cited bid from \$477,211 to about \$756,250. Dredging/disposal per cubic yard was bid competitively, based on the large total volume of sediment to be dredged for this multi-locational project.

During third quarter 2019, for example, while McAmis, a barge and scow USACE winning subcontractor, was fulfilling their contract with the USACE at Winchester Bay, they accepted an offer from Salmon Harbor Marina to add to their federally contracted work by “piggybacking“ the Marina’s work. A \$21/cubic yard charge was proposed to the Marina, rather than the \$11 or \$12/ cubic yard offered to the USACE as part of the federal project. The Marina would have had to pay hundreds of thousands of dollars to mobilize such equipment for themselves, unless they were able to gain agreement to “piggyback“ as described. The cost to dredge 25,000 cubic yards, if “piggybacking” was available, is therefore estimated at the Port of Brookings Harbor to be \$525,000, and, if “piggybacking” was not available, at best, \$777,000 (\$12/cy + \$477,000 mobe/demobe). However, many areas requiring dredging in Basins 1 and 2 would not be accessible via this equipment.

Hydraulic suction dredging utilizing contracting standard swing-ladder dredges has been seen to be a viable method at the Port, but comes with high move/demove costs, and does not lend itself to in-house maintenance dredging at smaller ports and marinas. Move/demove costs to and from nearby locations have been seen to range from \$40,000 to \$55,000. Dredging costs additional to move/demove have been found to range from \$20 to \$35/cubic yard, if sediment is disposed to nearby in-water or upland locations.

However, without development, no nearby in-water or upland disposal locations are available for the Port, and so the only other alternative is that of ocean disposal.

A number of analytical routines have been done for the Port, including selection of an appropriate pipe diameter (14" OD), determination of the required DR or SDR (17 SDR HDPE), determination of the required weighting, and of the design, construction and spacing of ballast weights, buoyant force, weight of pipe and pipe contents, methods of installation, preparation of land-to-water transition zones and, when required, underwater bedding, assembly of individual lengths of pipe into long continuous lengths, launching of pipeline into water, bending radius at which buckling can be initiated, etc. The higher sediment slurry velocities required in long pipelines to prevent clogging result in higher total dynamic head (TDH).

Combinations of pipe thicknesses necessary to resist the high total dynamic head (TDH) created by slurry traveling through 12,000 foot pipe lines at the recommended velocity are not found to be available for reasonably sized dredges, and so, booster pumping would be required.

Additional to the complexities associated with pumping slurry such long distances are those presented by the challenging task of working with a pipeline placed through river and ocean currents, whether floating or sunken. EMC has estimated designed and provided project engineering for ocean disposal and estimates the cost for such a project (25,000 cubic yards to the ocean disposal location via pipeline) from the Port to be \$980,000.

## **Disposal Limitations**

1. Available ocean disposal location is about 12000 feet from the furthest Port reach.
2. Hydraulic suction dredges small enough to navigate throughout the Port docks would be equipped with pump horsepower not sufficient to pump that distance, without at least one in-line booster pump. Potential pipeline pathways require a combination of land and water routes unfriendly to a successful dredging operation during winter weather.
3. USACE has determined in the past that the Chetco River reach and entrance are not approached with enough river flow energy to deliver flow-lane sediments beyond the federal channel.
4. No nearby in-water storage areas are permitted to be used by the Port.

5. When considering upland storage during a dredging event at the Port, it must be taken into account that any possible storage and de-watering area within the Port limits sediment volumes during a single event to 25,000 cubic yards, and reasonable volumes of 6 – 8000. Therefore, use of a large dredge for upland disposal at the Port would require multiple events and subsequently multiple move/demove costs, rendering this option infeasible.

6. Likewise, to utilize barge and scow for upland storage at the Port would present the Port, in addition to multiple handling of the sediment for placement, the same volume limitations and associated multiple move/demove costs.

So this Study concludes that a low cost, in-house dredging operation would bring many advantages to the Port. Flexibility and rapid response to ongoing mooring challenges would bring a level of internal control not often experienced at small ports in Southern Oregon. During our review of practicable alternatives, we concluded that a smaller and more mobile dredging unit could provide the required navigability, and in-house control, that would be affordable and be more able to provide the Port with long-term maintenance dredging.



It is also concluded that annual maintenance dredging volume requirements at the Port are relatively small, because the major portion of shoaled sediments from Port facilities slough to federally maintained channels, and so a modest maintenance program, on an annual basis, could maintain the Port mooring spaces, and additionally could enable the Port to gradually and affordably reduce its backlog, which has been accumulating over decades.

The above conclusions bring us to the analyses of in-house operational scenarios, utilizing small, maneuverable dredges, and local, perhaps even beneficial sediment disposal options.

EMC in the past has specified portable, centrifugal pump-driven slurry pumps, well fitted for the dredging of dock locations (e.g. Port of Port Orford).

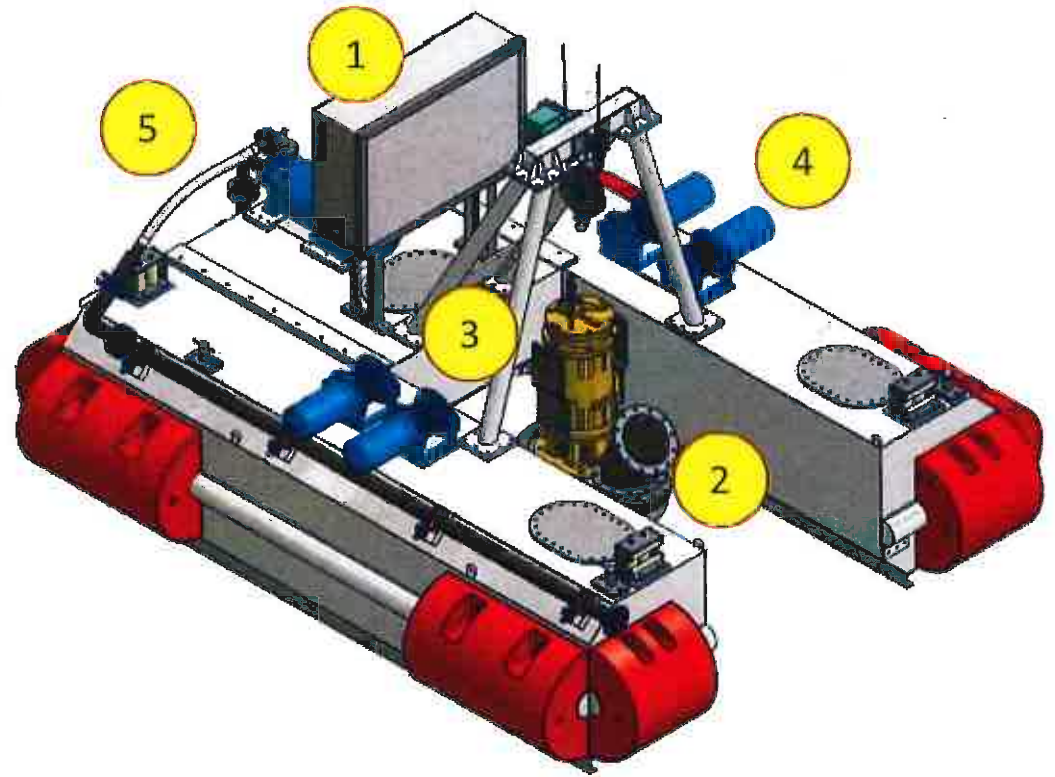
So equipment provided by BPH, Eddy, DragFlow and TOYO Pumps were analyzed and compared.

After considering economic value, equipment design, horsepower, maneuverability, etc., EMC recommends that the Port consider an in-house, small dredge system, utilizing the DragFlow DPR-120 remote controlled dredge, rigged with the EL 1204HH C Model pump system.

Slides and video clips focus on this equipment, its applicability, function and maintenance. We will also briefly review the proposed upland disposal option, permitting requirements and costs associated with this recommended in-house dredging option.

## Dredge Details:

1. Control Panel
2. Dredging pump
3. Electric Hoist
4. 4 Winches (45 – 110m)
5. Jet Ring System for breaking the material to be dredged



Client: Jack Akin - EMC-Engineers-Scientists, LLC-Oregon-US

Date: Oct 28, 2020

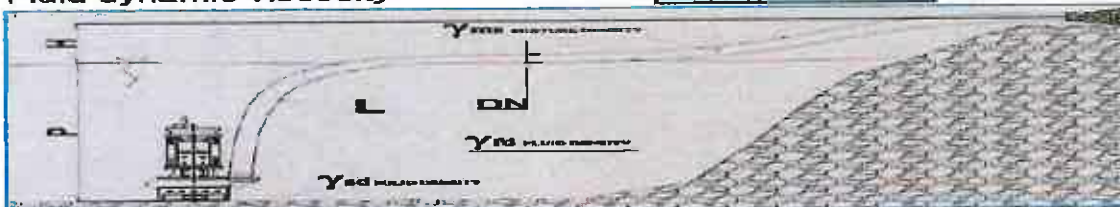
Project: SHM feasibility-

Author: Maurice

**Mixture Details**

Solids concentration in the mixture  
 % by volume  
 corresponding to % by weight  
**Solid Particles Dimension**  
 Particle Median Diameter  
 Liquid SG  
 Solids SG  
**Mixture Specific Gravity**  
 Fluid dynamic viscosity

	25	%
	40	%
<b>d50 &gt; 15 mm</b>		
	1	kg/dm <sup>3</sup>
	2	kg/dm <sup>3</sup>
	1.25	kg/dm <sup>3</sup>
	0.001	Pa s



**Application Details**

Geodetic Height (Air) = H  
 Geodetic Height (Water) = P  
 Pipeline Total Length = L  
 Pipe Internal Diameter = DN  
**Total Mixture Capacity**

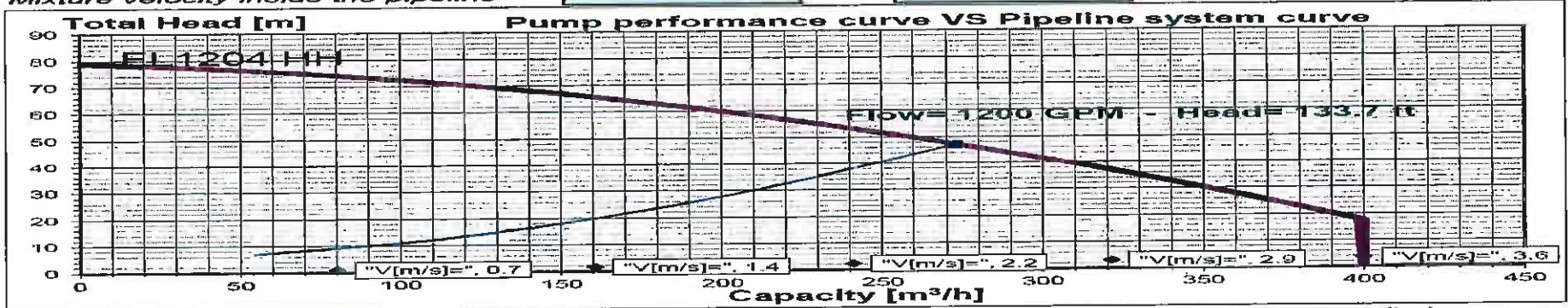
	1.2	m		.4	ft
	15.2	m		50	ft
	914.4	m		3000	ft
	168.2	mm		7.803	inch
	273	m <sup>3</sup> /h		1200	GPM

**System TDH at set capacity**

Friction loss along the pipeline  
 Concentrated pressure drops  
 Geodetic: [H+(mixSG-liqSG)\*P]  
**Total Dynamic Head (TDH)**  
 Mixture velocity inside the pipeline

SLURRY [m]		SLURRY [ft]	
	35.3 m		115.7 ft
	0.5 m		1.5 ft
	5.0 m		16.5 ft
	40.8 m		133.7 ft
	2.5 m/s		8.0 ft/s

<b>REQUIRED POWER</b>
100 HP
<b>PUMP POWER</b>
120 HP



\* All the above values come from theoretical calculations. The solid concentration can vary from 10% to 50% pump capacity due

**Port of Brookings-Harbor**  
**Calculation Sheet For 6" and 8", SDR 21 Pipeline, 120 hp**  
 by Jack Akin, MS, PE

$Q_{gpm}$	1098.00	1200.00	3000.00	1000.00	1720.00	3000.00
$C_{HW}$	155.00	155.00	155.00	155.00	155.00	155.00
$L_n$	3000.00	3000.00	3000.00	3000.00	3000.00	3000.00
$d_{in}$	5.96	5.96	5.96	7.75	7.75	7.75
$Q_n^{3/4}$	2.45	2.67	6.68	2.23	3.83	6.68
$V_{n/s}$	12.65	13.82	34.55	6.80	11.69	20.39
$e_n$	5.00E-06	5.00E-06	5.00E-06	5.00E-06	5.00E-06	5.00E-06
$v_{50}$	1.45E-05	1.45E-05	1.45E-05	1.45E-05	1.45E-05	1.45E-05
$R_e$	4.34E+05	4.74E+05	1.19E+06	3.04E+05	5.22E+05	9.11E+05
$e/D_n$	1.01E-05	1.01E-05	1.01E-05	7.74E-06	7.74E-06	7.74E-06
$Re^{0.9}$	1.18E+05	1.28E+05	2.93E+05	8.59E+04	1.40E+05	2.31E+05
F Log <sub>10</sub> Precale	-4.29	-4.32	-4.65	-4.16	-4.37	-4.57
Square of Previous	18.41	18.70	21.63	17.32	19.06	20.88
F Approx.	1.36E-02	1.34E-02	1.16E-02	1.44E-02	1.31E-02	1.20E-02
$1/F^{1/2}$	8.58	8.65	9.30	8.32	8.73	9.14
$1/F^{1/2} Calc$	8.56	8.63	9.30	8.30	8.71	9.13
$h_{f-DW}$	203.79	239.74	1294.87	48.09	129.30	359.02
$h_{e-n}$	0.00	0.00	0.00	0.00	0.00	0.00
$h_{s-n}$	0.00	0.00	0.00	0.00	0.00	0.00
$h_{v-n}$	2.48	2.97	18.54	0.72	2.12	6.46
$h_{f-HW}$	198.58	234.04	1274.93	46.31	126.31	353.50
TDH-HW	201.06	237.01	1293.47	47.03	128.44	359.96
TDH-DW	206.28	242.70	1313.41	48.81	131.42	365.48
HP <sub>Brake-HW</sub>	55.75	71.82	979.90	11.88	55.79	272.70
HP <sub>Brake-DW</sub>	57.20	73.55	995.01	12.33	57.08	276.88
Assumed total eff	0.65	0.65	0.65	0.65	0.65	0.65
HP <sub>DW</sub>	85.77	110.49	1507.54	18.27	85.82	419.54
HP <sub>DW</sub>	87.99	113.15	1530.78	18.96	87.82	425.97
Yds <sup>3</sup> /hr. (Production Rate)	32.62	35.65	89.13	29.71	51.10	89.13
10-Hr Days to Move .000 Yds <sup>3</sup> · 0.10 Sollds*	76.64	70.13	28.05	84.15	48.92	28.05

**Port of Brookings-Harbor**  
**Calculation Sheet For 6" and 8", SDR 21 Pipeline, 120 hp**  
 by Jack Akin, MS, PE

Adjusted $h_{f-HW}$	278.01	327.66	1784.90	64.84	176.84	494.91
Adjusted $HP_{HW}^{**}$	119.65	154.14	2101.91	25.47	119.59	584.34
Adjusted $v_{50}$ (assumes 20% slurry)	1.84E-05	1.84E-05	1.84E-05	1.84E-05	1.84E-05	1.84E-05
Adjusted $R_e$	3.42E+05	3.73E+05	9.33E+05	2.39E+05	4.11E+05	7.17E+05
Adjusted $R_e^{0.9}$	9.55E+04	1.03E+05	2.36E+05	6.93E+04	1.13E+05	1.86E+05
Adjusted $F \log_{10} \text{Precalc}$	-4.20E+00	-4.24E+00	-4.57E+00	-4.07E+00	-4.28E+00	-4.48E+00
Adjusted Square of Previous	17.66	17.94	20.87	16.57	18.29	20.09
Adjusted $F \text{ Approx.}$	1.42E-02	1.39E-02	1.20E-02	1.51E-02	1.37E-02	1.24E-02
Adjusted $1/F^{1/2}$	8.40	8.47	9.14	8.14	8.55	8.97
Adjusted $1/F^{1/2} \text{ Calc}$	8.38	8.45	9.13	8.12	8.53	8.95
Adjusted $TDH_{DW}$	217.58	255.93	1380.14	51.73	139.09	386.24
Adjusted $HP_{DW}$	92.82	119.31	1608.56	20.10	92.94	450.16

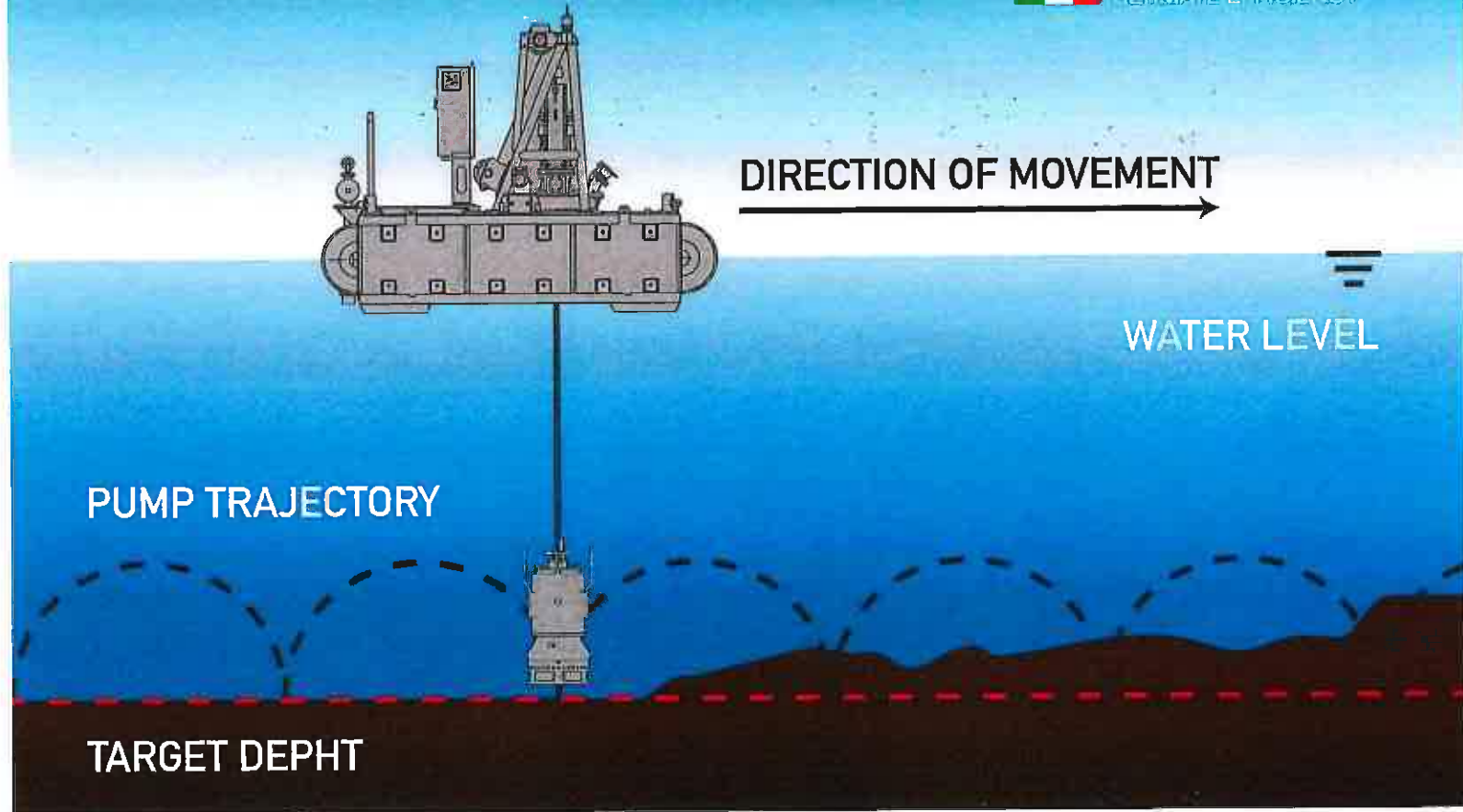
**Notes**

\* Production assumes 100% efficiency. The actual production rate and dredging period must be adjusted per project.

\*\* Safe recommended coefficient of 1.4 for various concentrations of slurry when using Hazen Williams.

Example: Automating depth and movement

**DRAGFLOW**  
ULTIMATE EFFICIENCY





**EXHIBIT E – Bathymetric Comparison  
to Investigate Shoaling Rates**



Grants Pass \* Jacksonville \* Medford, OR

GP Office: 1867 Williams Hwy., Suite 216, Grants Pass, OR, 97527

Jville Office: 450 Conestoga Dr., Jacksonville, OR, 97530

Ph: 541-474-9434 \* Cell: 541-261-9929 \* Fax 541-727-5488

[emc@emcengineersscientists.com](mailto:emc@emcengineersscientists.com); <http://www.emcengineersscientists.com>

- Engineers/Scientists, LLC

7/10/19

Gary Dehlinger  
Manager, Port of Brookings Harbor

7/10/19

Travis  
Port of Brookings Harbor Harbormaster

### MEMO 7102019-1; 2019 Bathymetric Survey Results

Attached are the key plans and volume calculations that indicate the volumes of sediments that have migrated into the Port of Brookings Harbor basins since shortly after the last major dredging event, which occurred in 2012, and that exists within the Port basins in 2019.

The bathymetric survey used to map out and compare 2013 volume levels with those in 2017 show a total volume increase of 16,683 yd.<sup>3</sup>. However, the most recently completed bathymetric survey has been mapped out, and its calculated volumes, utilizing the 2017 sediment elevations as its baseline, show a total sediment accumulation of 49,760 yd.<sup>3</sup>. If a standard averaging were to be used, the shoaling rate for the period between 2017 and 2019 can be estimated at approximately 24,880 yd.<sup>3</sup> per year. This shoaling rate, when compared with the normally expected rate of about 4500 yd.<sup>3</sup> per year, is dramatic, but not unexpected, based on observations that have been made in 2019.

As observed and previously estimated by EMC, it is believed that nearly all of 40,000 yd.<sup>3</sup> has accumulated within the Port basins due to storms and erosion from nearby wild fire residues on stream watersheds to the Port. Nevertheless, even a conservative and weighted value of 24,880 yd.<sup>3</sup> is about six times that which should be expected and have previously been observed to have shoaled into the Port basins.

Sincerely

Jack (John) Akin, MS, PE, IC, HMS, CAI  
EMC-Engineers/Scientists, LLC



PORT OF BROOKINGS  
POST-DREDGING VOLUMES

PRE-DREDGE SURVEY DATA SHOWN SUPPLIED BY  
OREGON MARINE BOARD BASIN SURVEY  
DATED: SEPTEMBER 16, 2017



AREA 1 - BASIN 1

POST-DREDGE CONTOURS  
TYPICAL

AREA 2 - ICE HOUSE

AREA 3  
BASIN 2

POST DREDGING  
ADDITIONAL VOLUMES

AREA 1	9,697 CU. YDS.
AREA 2	744 CU. YDS.
AREA 3	6,382 CU. YDS.
TOTAL	16,823 CU. YDS.

NOTE: VOLUMES COMPARED  
TO FEBRUARY, 2013 SURVEY

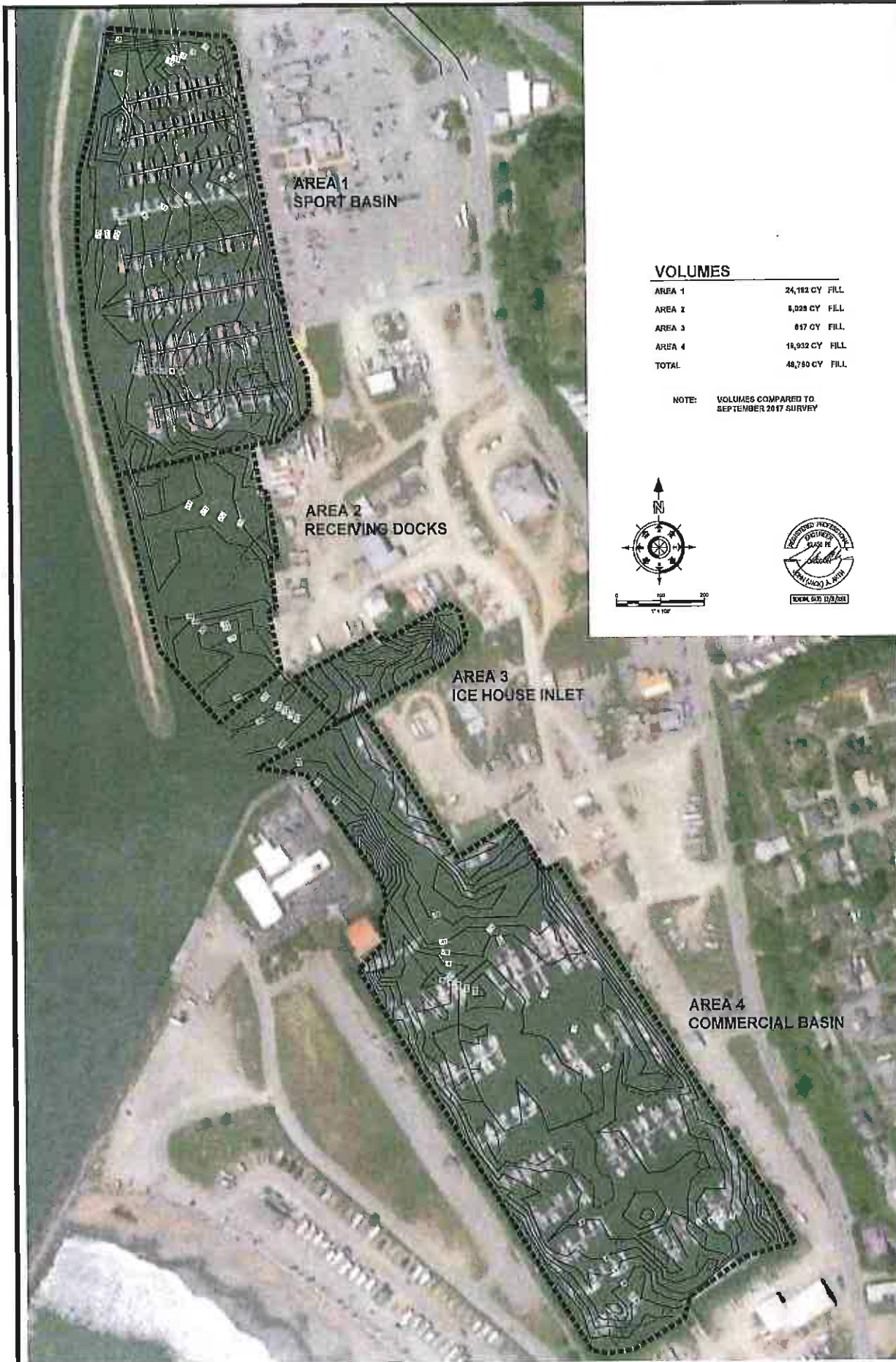
KEY PLAN

BROOKINGS HARBOR 1" = 400' +/-



09-15-17

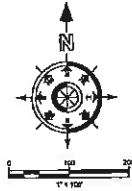
SHEET 1 OF 1



**VOLUMES**

AREA 1	24,182 CY FILL
AREA 2	8,028 CY FILL
AREA 3	817 CY FILL
AREA 4	18,932 CY FILL
TOTAL	48,780 CY FILL

NOTE: VOLUMES COMPARED TO SEPTEMBER 2017 SURVEY



**EXHIBIT F – BCA Produced and  
Submitted for HMGP Funding Request**



FEMA

# Benefit-Cost Calculator

V.6.0 (Build 20200819.1933)

## Benefit-Cost Analysis

Project Name: POBH Embankment Stabilization/Stormwater Protection



Leaflet | Tiles © Esri

Map Marker	Mitigation Title	Property Type	Hazard	Benefits (B)	Costs (C)	BCR (B/C)
1	Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415_copy_copy_copy_copy	●●●	DFA - Severe Storm	\$ 7,446,159	\$ 4,302,140	1.73
2	Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415_copy_copy_copy_copy	●●●	DFA - Severe Storm	\$ 7,446,159	\$ 4,302,140	1.73
<b>TOTAL (SELECTED)</b>				<b>\$ 14,892,318</b>	<b>\$ 8,604,280</b>	<b>1.73</b>
<b>TOTAL</b>				<b>\$ 14,892,318</b>	<b>\$ 8,604,280</b>	<b>1.73</b>

Property Configuration	
Property Title:	Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415_copy_copy_copy_copy
Property Location:	97415, Curry, Oregon
Property Coordinates:	42.05127, -124.26676
Hazard Type:	Severe Storm
Mitigation Action Type:	Other
Property Type:	Other
Analysis Method Type:	Professional Expected Damages

Cost Estimation	
Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415_copy_copy_copy_copy	
Project Useful Life (years):	40
Project Cost:	\$4,258,897
Number of Maintenance Years:	40 Use Default:Yes
Annual Maintenance Cost:	\$14,167

Comments**Project Useful Life:**

Not all work will last, without repair, for 40 years. Therefore note that for asphalt pavement construction, added ongoing expenses for periodic seal-coating and repair are added under Annual Maintenance Cost. Also, dredging having been done assumes subsequent normal sediment shoaling into the Port annually of 4500 cy. However, a 20% increase has been estimated from recent observations made by the engineer-of-record, which amounts to an additional 900 cy/yr., or 4500 cy/5 yrs. This amount over 40 years is placed under Damages After Mitigation in this BCA.

**Mitigation Project Cost:**

Please see the attached Project Budget Sheets (see attachments C-1, C-2 and C-3). These layout the three subprojects (Parking Lot, Roads & Storage; Boat Yard & Kite Field RV Park), with associated itemized cost estimates, totaling 1,858,897, which is the request from the HMGP (it may be that not enough funding via the HMGP is presently available, and so a PA request is also in process). This workbook contains three calculating sheets, the sheets are named "Parking Lot, Roads and Storage", "Boat Yard" and "Kite Field RV Park". In all three sheets the last column to the right, labeled "4452 HMGP", is that which is applicable to this project. So, for the sub-project "Parking Lot, Roads and Storage", the subtotal is \$546,805. The sub-project subtotal for the "Boat Yard" is \$812,828 The sub-project subtotal for the "Kite Field RV Park" is \$499,265. The total for all three of the sub-projects is \$1,858,897,. This total is added to the previously submitted total for the declared disasters during February (4432-DR-OR) and April (4452-DR-OR) of 2019. Attached FEMA inspections (see attachments E-1a, E-1b & E-1c for background and copies of WO 45060 and WO 47755) were conducted on 9/20/2019. Damage assessment via sequential bathymetric survey and historical photography were submitted to FEMA. As of the date of this Report, the approval process is in ongoing. Further, recent publication and engineering study has identified wildfire-related erosion and sedimentation within the Port basins. Upland layering would be used to beneficially grade surfaces for protective paving. Paving is recommended to 1) stabilize embankment slopes and control erosive stormwater flows, and 2) mitigate issues associated with the environmental threat outlined below. Additionally, stormwater pollutants are found to be posing a threat to the environment,. Recent (1st and 2nd 1/4ly, 2020) ODEQ-required stormwater sampling has shown the release of pollutants being delivered to the waters of the State. To these are added previously applied for 4432 and 4452 funding requests. 4432 requests \$755,000 and 4452 \$1,710,000 for embankment repair and sediment removal. Since that request we have found alternative sediment handling that can reduce, and that beneficially, 4452 costs by \$125,000, that is; from \$1,770,000 to \$1,645,000, and thus the total from \$2,525,000 to \$2,400,000. As a result of declared disasters during February (4432-DR-OR) and April (4452-DR-OR) of 2019 the Port of Brookings Harbor petitioned for assistance via the HMGP. Attached FEMA inspections (WO 45060 and WO 47755) were conducted on 9/20/2019. Damage assessment via sequential bathymetric survey and historical photography were submitted to FEMA. As of the date of this Report, the approval process is in ongoing. The total of all requests would therefore be \$4,258,897 which is the total Project Cost Estimation used for this BCA. Also, referenced within the Project Budget Sheets are preliminary engineered drawings (attached as B-4 and B-5). These are not construction drawings. RE the attached preliminary drawings: These drawings, entitled HMGP-DR-4452, 2020 Improvements, include some master planning, most but not all of which are applicable to this Project. All of these drawings, notes, specifications are adequate for cost estimation and regulatory review, but are preliminary. Construction drawings will follow. The drawing package consists of 21 sheets. Sheet C1.0 is the cover sheet for the packet.

280



Sheet C1.1 contains applicable General Notes, Grading Notes, etc. Sheet C1.2 contains other Notes and several Sections, all of which are applicable to this Project. Sheet C1.3 is simply an overall plan view of Basin 2. Sheets C2.0, 2.1 and 2.2 contain Notes and ESCP Details that are applicable to this project. Sheet C3.0 is of the Kite field – RV Park, showing 25 concrete pads and vehicle parking for pull-through RV units. This drawing will be revised to accommodate a total of 15, rather than 25 units. Cut and fill volumes as shown on the sheet are still correct. On a preliminary basis. Construction drawings will be more accurate, as they will be based on field surveyed data, rather than the GIS data presently being used. Sheet C4.0 is a preliminary drawing showing the north roads and parking lot, along with dredge sediments cut and fill volumes. The storage buildings on Sheet C4.0, as well as the details on Sheets C4A & C4B, the photos on Sheet C4C do not pertain to this project. The top and profile views of the roads on Sheets C4.1 through C4.6 are preliminary and applicable, but must be revised for construction drawings after professional survey or data is obtained. Sheet C5.0 shows the Boat Yard with planned cut and fill estimates, applicable to this project. Sheet C6.0 provides pre-design cross sections and Notes as specified by the engineer-of-record for wheel stops, curb with taper, conduit trenching, sewer trenching, concrete sidewalk, vertical curbing, curb and gutter, rolled curbing, control Joints, water and joint trenching, driveway guttering, typical clean outs, storm manholes, catch and junction basin details, all of which are applicable to this project. Under the newly obtained ODEQ 1200-Z Industrial Stormwater Permit, the Port completed its first two water sampling events and the laboratory results show considerable exceedances. The 5-14-20 Stormwater Review and Recommendations and POBH SWPCP for reference (see attached D-4a and D-4b) indicate that dirt/gravel roads, gear storage and boat yard facilities contribute to the non-compliant total suspended solids and regulated metals. Needed stormwater control as would be provided via paved surfaces directed to catch basins with Best Management practices.

**Annual Maintenance Cost:**

Proposed improvements (cut/fill, paving, embankment repair & stabilization) will decrease maintenance requirements. At present unpaved areas and unstable slopes must be routinely, temporarily repaired. Assuming a rigorous sealcoating schedule every three years, annual paved road and parking lot maintenance costs may be conservatively estimated at \$14,167/yr.

Damage Analysis Parameters - Damage Frequency Assessment  
 Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415\_copy\_copy\_copy\_copy

Year of Analysis Conducted:	2020
Year Property was Built:	1978
Analysis Duration:	43 Use Default:Yes

Professional Expected Damages Before Mitigation  
 Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415\_copy\_copy\_copy\_copy

Recurrence Interval (years)	OTHER	OPTIONAL DAMAGES			VOLUNTEER COSTS		TOTAL
	Damages (\$)	Category 1 (\$)	Category 2 (\$)	Category 3 (\$)	Number of Volunteers	Number of Days	Damages (\$)
8	2,525,000	0	0	0	0	0	3,550,000
1	95,758	0	0	0	0	0	95,758

Comments

**Damages Before Mitigation:**

Expected Damages are considered to be the cost of damage repair to restore action areas to their original condition (\$2,525,000). This budget has been submitted to FEMA via DR 4432 and 4452. An 8-yr. recurrence is deemed reasonable because, as noted in the attached Special Districts 2018 POBH NHMP (see attachment F-1, P13, Gen. SW Drainage, and P14, Embankments), degradation due to flood and storm damage is accelerating. Ongoing erosion and structural damage to Port, as seen from repairs required due to storm/flood damages in the last eight (8) years total, not including that caused by the 2011 tsunami, \$4,645,000 (\$120k+\$280k+\$650k+\$3595k), is shown in the Application, Section 3.1.5, Table. Attached engineering reports for these disasters over the last eight years are, respectively, GeoDesign Engineering Report and accompanying Overall Map of Slides; POBH Dock Failure Preliminary Reports-1 and 2; 3-24-17 Sport Basin Boardwalk Memo and, the most recent submitted 4432 and 4452 application; (WO 45060 & WO 47755 attached for the convenience of the reader). Projects not being done at present, that are already in-progress or have already been completed are not included in this BCA, except to support the overall periodicity of severe storm/erosive damages. RE required annual stormwater treatment as a result of newly discovered Port NPDES (1200-Z) non-compliance: Bioretention areas, swales, channels, detention areas, sand filters, gravity separators, dry wells, trenches, stormwater ponds, pavers, porous concrete, rain harvesting, and stormwater wetlands were reviewed. Swales, retention areas, trenches, ponds, harvesting and stormwater wetlands are not feasible due to limited treatment areas and high flows. R-D-1 50 for the Brookings area w/ Tc (3-6 minutes) estimated at 4.0. High intensity storms in the area require a coefficient adjustment of 1.2. The total volume of stormwater produced by the 18 acres area produces 73.34 ft.<sup>3</sup>/s, or about 32,917 GPM. Estimated stormwater treatment costs/yr, based on previous work reviewed by EMC, to treat to benchmark concentrations is about \$2.91/GPM/season. Attached is the 5-14-20 Stormwater Review and Recommendations, and the POBH SWPCP for reference. (Note: Reviewer can see all attached documents, spreadsheets, drawings citations in the "Attachment Index" Table in the Application.)

Annualized Damages Before Mitigation

Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415\_copy\_copy\_copy\_copy

Annualized Recurrence Interval (years)	Damages and Losses (\$)	Annualized Damages and Losses (\$)
1	95,758	510,164
8	3,550,000	443,750
	Sum Damages and Losses (\$)	Sum Annualized Damages and Losses (\$)
	3,645,758	953,914

Professional Expected Damages After Mitigation

Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415\_copy\_copy\_copy\_copy

Recurrence Interval (years)	OTHER	OPTIONAL DAMAGES			VOLUNTEER COSTS		TOTAL
	Damages (\$)	Category 1 (\$)	Category 2 (\$)	Category 3 (\$)	Number of Volunteers	Number of Days	Damages (\$)
5	1,282,500	0	0	0	0	0	1,282,500
1	23,500	0	0	0	0	0	23,500

Comments

**Damages After Mitigation:**

A recent bathymetric survey analyses was performed by the Port showing elevated shoaling rates, attributable to recent wildfires above the Chetco watershed. It is attached, entitled Memo RE Elevated 2017-2019 Shoaling Rates. The narrative examines recent shoaling rates as about six times that of average experienced at the Port. However, this phenomenon can not be predicted via available research. A 20% increase has been estimated from recent observations made by the engineer-of-record, which amounts to an additional 900 cy/yr., or 4500 cy/5 yrs. Therefore the average rate of 4500 cy sediment/yr. is used in this analysis. The dredging estimate of \$57/cy, disposed to EPA-managed ocean unit, is conservatively used. This volume is funded via Port resources. Paving and embankment repair are included in the maintenance cost/yr section of this analysis. Stormwater treatment to obtain acceptable levels will be greatly diminished by separating stormwater from Port soils, but not entirely diminished. Final polishing will likely be required at Gear Storage # 1 and Boat Yard. Filtering is estimated to cost about \$12,750 per outfall/year for the two outfalls.

Annualized Damages After Mitigation  
Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415\_copy\_copy\_copy\_copy

Annualized Recurrence Interval (years)	Damages and Losses (\$)	Annualized Damages and Losses (\$)
1	23,500	138,884
5	1,282,500	256,500
	Sum Damages and Losses (\$)	Sum Annualized Damages and Losses (\$)
	1,306,000	395,384

Benefits-Costs Summary  
Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415\_copy\_copy\_copy\_copy

Total Standard Mitigation Benefits:	\$7,446,159
Total Additional Benefits - Social:	\$0
Total Additional Benefits - Ecosystem Services:	\$0
Total Mitigation Project Benefits:	\$7,446,159
Total Mitigation Project Cost:	\$4,302,140
Benefit Cost Ratio - Standard:	1.73
Benefit Cost Ratio - Standard + Additional:	1.73

Property Configuration

Property Title:	Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415_copy_copy_copy_copy_copy
Property Location:	97415, Curry, Oregon
Property Coordinates:	42.05127, -124.25676
Hazard Type:	Severe Storm
Mitigation Action Type:	Other
Property Type:	Other
Analysis Method Type:	Professional Expected Damages

Cost Estimation

Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415\_copy\_copy\_copy\_copy\_copy

Project Useful Life (years):	40
Project Cost:	\$4,258,897
Number of Maintenance Years:	40 Use Default:Yes
Annual Maintenance Cost:	\$14,167

Comments

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**Project Useful Life:**

Not all work will last, without repair, for 40 years. Therefore note that for asphalt pavement construction, added ongoing expenses for periodic seal-coating and repair are added under Annual Maintenance Cost. Also, dredging having been done assumes subsequent normal sediment shoaling into the Port annually of 4500 cy. However, a 20% increase has been estimated from recent observations made by the engineer-of-record, which amounts to an additional 900 cy/yr, or 4500 cy/5 yrs. This amount over 40 years is placed under Damages After Mitigation in this BCA.

•

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 Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415\_copy\_copy\_copy\_copy\_copy

Year of Analysis Conducted:	2020
Year Property was Built:	1978
Analysis Duration:	43 Use Default:Yes

Professional Expected Damages Before Mitigation  
 Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415\_copy\_copy\_copy\_copy\_copy

Recurrence Interval (years)	OTHER	OPTIONAL DAMAGES			VOLUNTEER COSTS		TOTAL
	Damages (\$)	Category 1 (\$)	Category 2 (\$)	Category 3 (\$)	Number of Volunteers	Number of Days	Damages (\$)
8	2,525,000	0	0	0	0	0	3,550,000
1	95,758	0	0	0	0	0	95,758

Comments

**Damages Before Mitigation:**

Expected Damages are considered to be the cost of damage repair to restore action areas to their original condition (\$2,525,000). This budget has been submitted to FEMA via DR 4432 and 4452. An 8-yr. recurrence is deemed reasonable because, as noted in the attached Special Districts 2018 POBH NHMP (see attachment F-1, P13, Gen. SW Drainage, and P14, Embankments), degradation due to flood and storm damage is accelerating. Ongoing erosion and structural damage to Port, as seen from repairs required due to storm/flood damages in the last eight (8) years total, not including that caused by the 2011 tsunami, \$4,645,000 (\$120k+\$280k+\$650k+\$3595k), is shown in the Application, Section 3.1.5, Table. Attached engineering reports for these disasters over the last eight years are, respectively, GeoDesign Engineering Report and accompanying Overall Map of Slides; POBH Dock Failure Preliminary Reports-1 and 2; 3-24-17 Sport Basin Boardwalk Memo and, the most recent submitted 4432 and 4452 application; (WO 45060 & WO 47755 attached for the convenience of the reader). Projects not being done at present, that are already in-progress or have already been completed are not included in this BCA, except to support the overall periodicity of severe storm/erosive damages. RE required annual stormwater treatment as a result of newly discovered Port NPDES (1200-Z) non-compliance: Bioretention areas, swales, channels, detention areas, sand filters, gravity separators, dry wells, trenches, stormwater ponds, pavers, porous concrete, rain harvesting, and stormwater wetlands were reviewed. Swales, retention areas, trenches, ponds, harvesting and stormwater wetlands are not feasible due to limited treatment areas and high flows. R-D-I 50 for the Brookings area w/ Tc (3-6 minutes) estimated at 4.0. High intensity storms in the area require a coefficient adjustment of 1.2. The total volume of stormwater produced by the 18 acres area produces 73.34 ft.<sup>3</sup>/s, or about 32,917 GPM. Estimated stormwater treatment costs/yr, based on previous work reviewed by EMC, to treat to benchmark concentrations is about \$2.91/GPM/season. Attached is the 5-14-20 Stormwater Review and Recommendations, and the POBH SWPCP for reference. (Note: Reviewer can see all attached documents, spreadsheets, drawings citations in the "Attachment Index" Table in the Application.)

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Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415\_copy\_copy\_copy\_copy\_copy

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	Damages (\$)	Category 1 (\$)	Category 2 (\$)	Category 3 (\$)	Number of Volunteers	Number of Days	Damages (\$)
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Comments

**Damages After Mitigation:**

A recent bathymetric survey analyses was performed by the Port showing elevated shoaling rates, attributable to recent wildfires above the Chetco watershed. It is attached, entitled Memo RE Elevated 2017-2019 Shoaling Rates. The narrative examines recent shoaling rates as about six times that of average experienced at the Port. However, this phenomenon can not be predicted via available research. A 20% increase has been estimated from recent observations made by the engineer-of-record, which amounts to an additional 900 cy/yr., or 4500 cy/5 yrs. Therefore the average rate of 4500 cy sediment/yr. is used in this analysis. The dredging estimate of \$57/cy, disposed to EPA-managed ocean unit, is conservatively used. This volume is funded via Port resources. Paving and embankment repair are included in the maintenance cost/yr section of this analysis. Stormwater treatment to obtain acceptable levels will be greatly diminished by separating stormwater from Port soils, but not entirely diminished. Final polishing will likely be required at Gear Storage # 1 and Boat Yard. Filtering is estimated to cost about \$12,750 per outfall/year for the two outfalls.

Annualized Damages After Mitigation

Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415\_copy\_copy\_copy\_copy\_copy

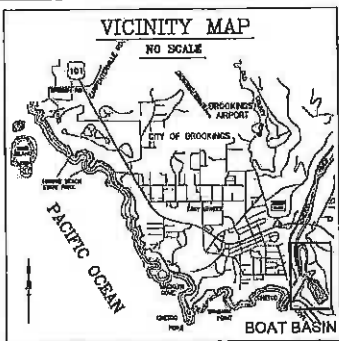
Annualized Recurrence Interval (years)	Damages and Losses (\$)	Annualized Damages and Losses (\$)
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Benefits-Costs Summary

Other @ 16330 Lower Harbor Rd, Brookings, Oregon, 97415\_copy\_copy\_copy\_copy\_copy

Total Standard Mitigation Benefits:	\$7,446,159
Total Additional Benefits - Social:	\$0
Total Additional Benefits - Ecosystem Services:	\$0
Total Mitigation Project Benefits:	\$7,446,159
Total Mitigation Project Cost:	\$4,302,140
Benefit Cost Ratio - Standard:	1.73
Benefit Cost Ratio - Standard + Additional:	1.73





PORT  
OF  
BROOKINGS  
HARBOR



PORT OF BROOKINGS-HARBOR  
2021 CIVIL IMPROVEMENTS

**SEDIMENT STOCKPILE  
LOCATION #2**

**NATURAL FEATURES**  
EXISTING NATURAL RESOURCES OR NATURAL HAZARDS ON THE SUBJECT PROPERTY, INCLUDING WETLANDS, STREAMS, RIPARIAN AREAS, FLOOD PLAINS, OR FLOODWAYS TO BE DETERMINED BY ENGINEER

**EXISTING TREE CANOPY**  
THERE ARE NO EXISTING TREES ON THE SUBJECT PROPERTY

**CULTURAL RESOURCES**  
LOCALLY, OR FEDERALLY DESIGNATED HISTORIC AND/OR CULTURAL RESOURCES ON THE SITE OR ON ADJACENT PARCELS TO BE DETERMINED BY ENGINEER.

**PUBLIC SERVICES**  
PUBLIC UTILITY SERVICES, INCLUDING WATER, SEWER, STORM DRAINAGE, POWER, TELEPHONE, CABLE INTERNET, AND GAS ARE AVAILABLE TO THE SUBJECT PROPERTY.

**UTILITY STATEMENT**  
EXISTING UNDERGROUND UTILITIES ILLUSTRATED IN THESE PLANS ARE APPROXIMATED BASED ON MAPS OBTAINED FROM CURRY COUNTY GIS ELEVATIONS ESTIMATES, OR HAVE BEEN LOCATED BY A UTILITY LOCATE COMPANY. LAYOUT INDICATED IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. ALL LINES WITHIN PROJECTED WORK ZONE SHALL BE FIELD VERIFIED AS REQUIRED PRIOR TO CONSTRUCTION.

**PROJECT DESCRIPTION**

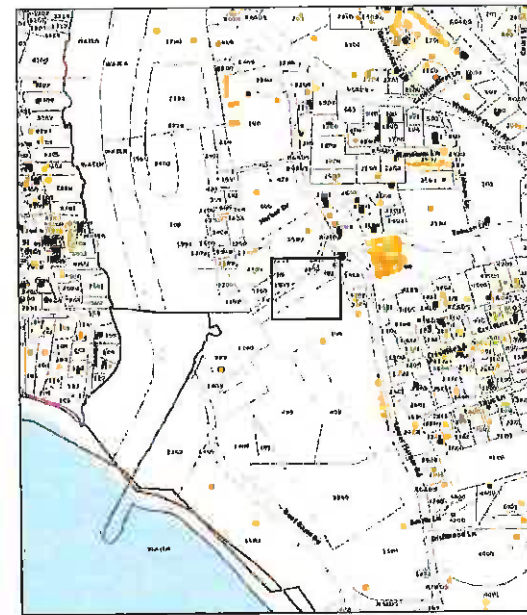
TITLE: SEDIMENT STOCKPILE  
REFERENCE: PB114  
LOCATION: HARBOR ST  
TAX LOT(S): 2500

**DRAWING REGISTER**

PB114-C100 COVER SHEET  
PB114-C101 GRADING NOTES  
PB114-C102 EXISTING CONDITIONS  
PB114-C103 PROPOSED SEDIMENT STOCKPILE



PROJECT OVERVIEW  
SCALE 1" : 100'



PORT OF BROOKINGS HARBOR  
MAP OF TAX LOTS

**PRELIM GRADING NOTES**

1. DEQ 1200-C PERMIT IS REQUIRED.
2. UNLESS DIRECTED OTHERWISE, REMOVE CLEARED AND GRUBBED MATERIAL FROM THE SITE AND DISPOSE AT AN APPROVED LOCATION.
3. PRIOR TO THE START OF CONSTRUCTION, VERIFY GRADES AT SAWCUT LOCATIONS AND MATCHING OF EXISTING GRADE LOCATIONS.
4. MINIMIZE TRAFFIC ON SOIL AREAS DURING WET WEATHER. IF THE SITE SOILS ARE EXPOSED DURING WET WEATHER, THE USE OF CRUSHED ROCK PLACED AS ENGINEERED FILL IN THE BOTTOM OF THE EXCAVATIONS MAY BE NECESSARY TO PROTECT THE SUBGRADE. TAKE ALL PRECAUTIONS TO LIMIT SURFACE DISTURBANCE AND PROTECT THE SITE GRADING AREA FROM EROSION AND RUNOFF.
5. UNLESS OTHERWISE NOTED, THE SAMPLING AND TESTING OF MATERIALS FOR USE ON THE JOBSITE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. ALL TESTING OF MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY A CERTIFIED TESTER. RESULTS OF THE TESTS SHALL BE SENT DIRECTLY TO THE PROJECT ENGINEER AS WELL AS THE CONTRACTOR, BY THE LABORATORY. LOCATION AND FREQUENCY OF TESTS SHALL BE DESIGNATED BY THE GENERAL CONTRACTOR.
6. ALL CUT AND FILL SLOPES SHALL BE MAXIMUM OF 2:1.

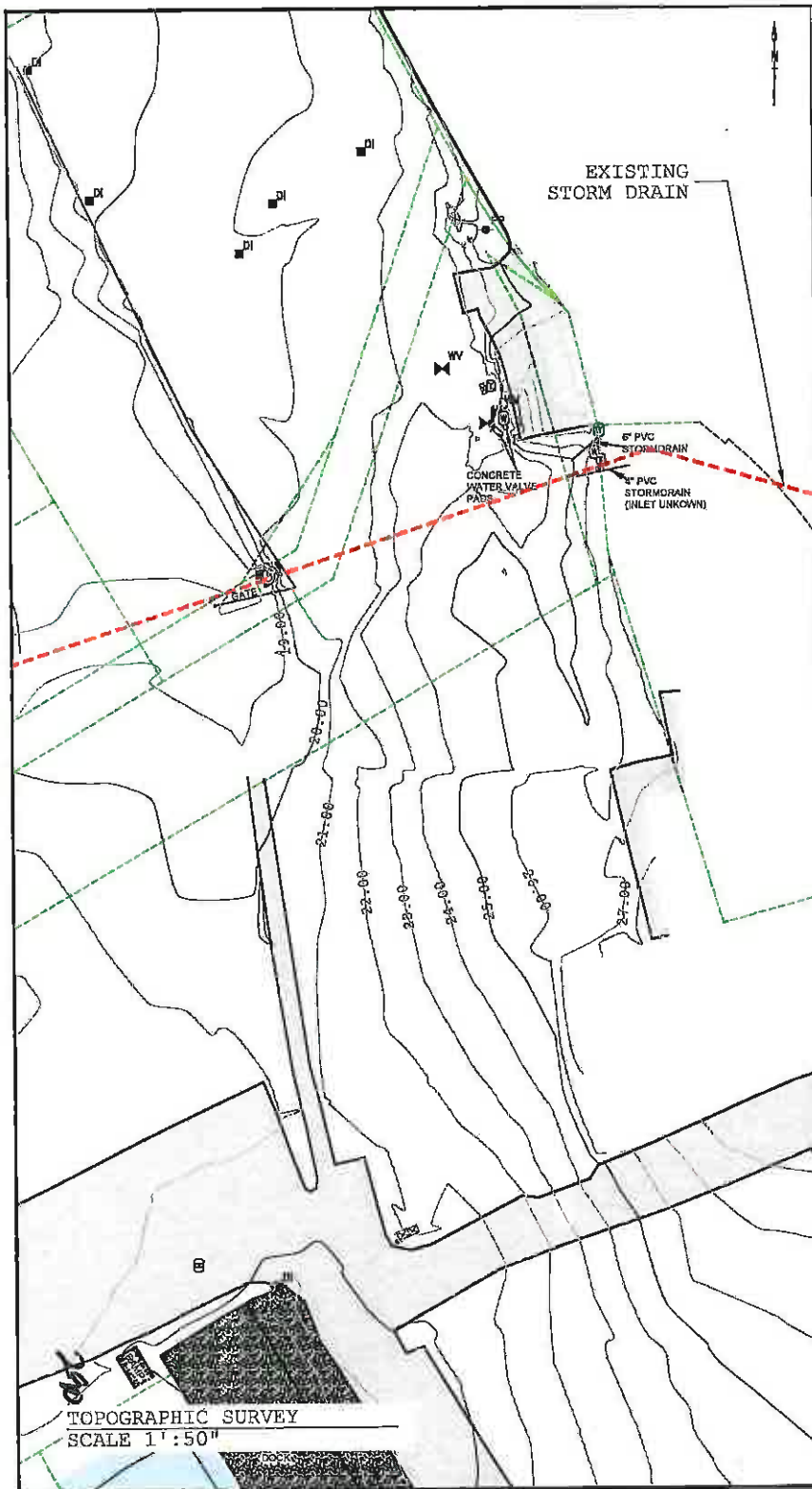
**LEGEND**

- 5 ELEVATION
- SUBGRADE MINOR CONTOUR
- SUBGRADE MAJOR CONTOUR
- PARCEL
- GEOTEXTILE
- CONCRETE PAD
- GRASS
- JETTY
- SLIP WAY
- PAVED ROAD



ENGINEER: **EMCI**  
 ENGINEER: **EMCI**  
 PREPARED FOR: (LOT 2500, MAP '85USZ20B')  
**PORT OF BROOKINGS**  
 16330 Lower Harbor Rd, Brookings, OR 97415  
 Date: 04/04/2021  
 Drawn By: INFRADRAFT  
 Sheet No.: C-100  
 File No.: PB114

285



**GRADING NOTES**

1. PRIOR TO THE CONSTRUCTION OF EMBANKMENTS, THE CONTRACTOR SHALL EXCAVATE UNSUITABLE FOUNDATION MATERIAL. BASEMENTS, TRENCHES AND HOLES ENCOUNTERED WITHIN EMBANKMENT LIMITS SHALL BE FILLED WITH APPROVED MATERIAL. PRIOR TO BACKFILLING THE CONTRACTOR SHALL BREAK CONCRETE FLOORS OF BASEMENTS AS DIRECTED. THE CONTRACTOR SHALL BREAK UP AND ROUGHEN THE GROUND SURFACE BEFORE EMBANKMENTS MATERIAL IS PLACED THE NATURAL GROUND UNDERLYING EMBANKMENTS SHALL BE COMPACTED TO THE DENSITY SPECIFIED FOR THE EMBANKMENT MATERIALS TO BE PLACED, AND TO THE DEPTH OF THE GRUBBING OR A MINIMUM OF 6 INCHES.
2. EMBANKMENT CONSTRUCTION SHALL INCLUDE PREPARATION OF THE AREAS UPON WHICH EMBANKMENTS ARE PLACED, THE PLACEMENT AND COMPACTION OF APPROVED EMBANKMENT MATERIALS AND FILLING OF HOLES, PITS AND OTHER DEPRESSIONS WITHIN THE SUBDIVISION.
3. THE CONTRACTOR SHALL PLACE EMBANKMENTS AND FILLS IN THE HORIZONTAL LAYERS OF 8 INCHES MAXIMUM DEPTH AND COMPACT EACH LAYER TO THE DENSITY SPECIFIED.
4. EMBANKMENT SHALL NOT BE CONSTRUCTED WHEN THE EMBANKMENT MATERIAL OR THE FOUNDATION ON WHICH THE EMBANKMENT WOULD BE PLACED IS FROZEN.
5. IMMEDIATELY PRIOR TO COMPLETION OF THE EARTHWORK, THE CONTRACTOR SHALL CLEAN THE ENTIRE WORK AREA OF DEBRIS AND FOREIGN MATTER.
6. THE MAXIMUM DENSITY OF COMPACTED MATERIAL WILL BE DETERMINED BY AASHTO T-99
7. THE CONTRACTOR SHALL COMPACT ALL EMBANKMENTS, FILLS AND BACKFILLS TO A MINIMUM IN PLACE DENSITY OF 95 PERCENT.
8. THE CONTRACTOR SHALL WATER THE MATERIALS TO PROVIDE OPTIMUM MOISTURE FOR COMPACTION OF EMBANKMENT AND BACKFILLS. EMBANKMENTS OR BACKFILL MATERIALS SHALL NOT BE PLACED IN FINAL POSITION UNTIL MOISTURE IN EXCESS OF OPTIMUM MOISTURE HAS BEEN REMOVED.
9. IF THE SPECIFIED COMPACTION IS NOT OBTAINED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER. THE CONTRACTOR MAY BE REQUIRED TO USE A MODIFIED COMPACTION PROCEDURE OR APPLY ADDITIONAL COMPACTION EFFORT. IF APPROVED MATERIALS MEETING THE SPECIFICATIONS CANNOT BE COMPACTED TO THE REQUIRED DENSITY REGARDLESS OF COMPACTION EFFORT OR METHOD, THE ENGINEER MAY REDUCE THE REQUIRED DENSITY OR DIRECT THE ALTERNATE MATERIALS BE USED. IN NO CASE SHALL EARTHWORK OPERATIONS PROCEED UNTIL THE CONTRACTOR IS ABLE TO COMPACT THE MATERIAL TO THE SATISFACTION OF THE ENGINEER.
10. DEQ 1200-C PERMIT IS NOT REQUIRED.
11. UNLESS DIRECTED OTHERWISE, REMOVE CLEARED AND GRUBBED MATERIAL FROM THE SITE AND DISPOSE AT AN APPROVED LOCATION.
12. UNLESS OTHERWISE NOTED, THE SAMPLING AND TESTING OF MATERIALS FOR USE ON THE JOBSITE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. ALL TESTING OF MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY A CERTIFIED TESTER. RESULTS OF THE TESTS SHALL BE SENT DIRECTLY TO THE PROJECT ENGINEER AS WELL AS THE CONTRACTOR, BY THE LABORATORY. LOCATION AND FREQUENCY OF TESTS SHALL BE DESIGNATED BY THE GENERAL CONTRACTOR.
13. ALL CUT AND FILL SLOPES SHALL BE MAXIMUM OF 2:1.

**GEOTECHNICAL NOTE**

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE PROJECT ENGINEER FOR REQUIRED REMEDIATION. THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT ENGINEER FOR REQUIRED SITE OBSERVATIONS AND TESTING OF ALL FILLS.

TOPOGRAPHIC SURVEY  
SCALE 1" = 50'



NO.	DATE	REVISION	BY



PREPARED FOR:  
**PORT OF BROOKINGS**  
16930 Lower Harbor Rd, Brookings, OR 97415  
(LOT 3600, MAP "060220B")

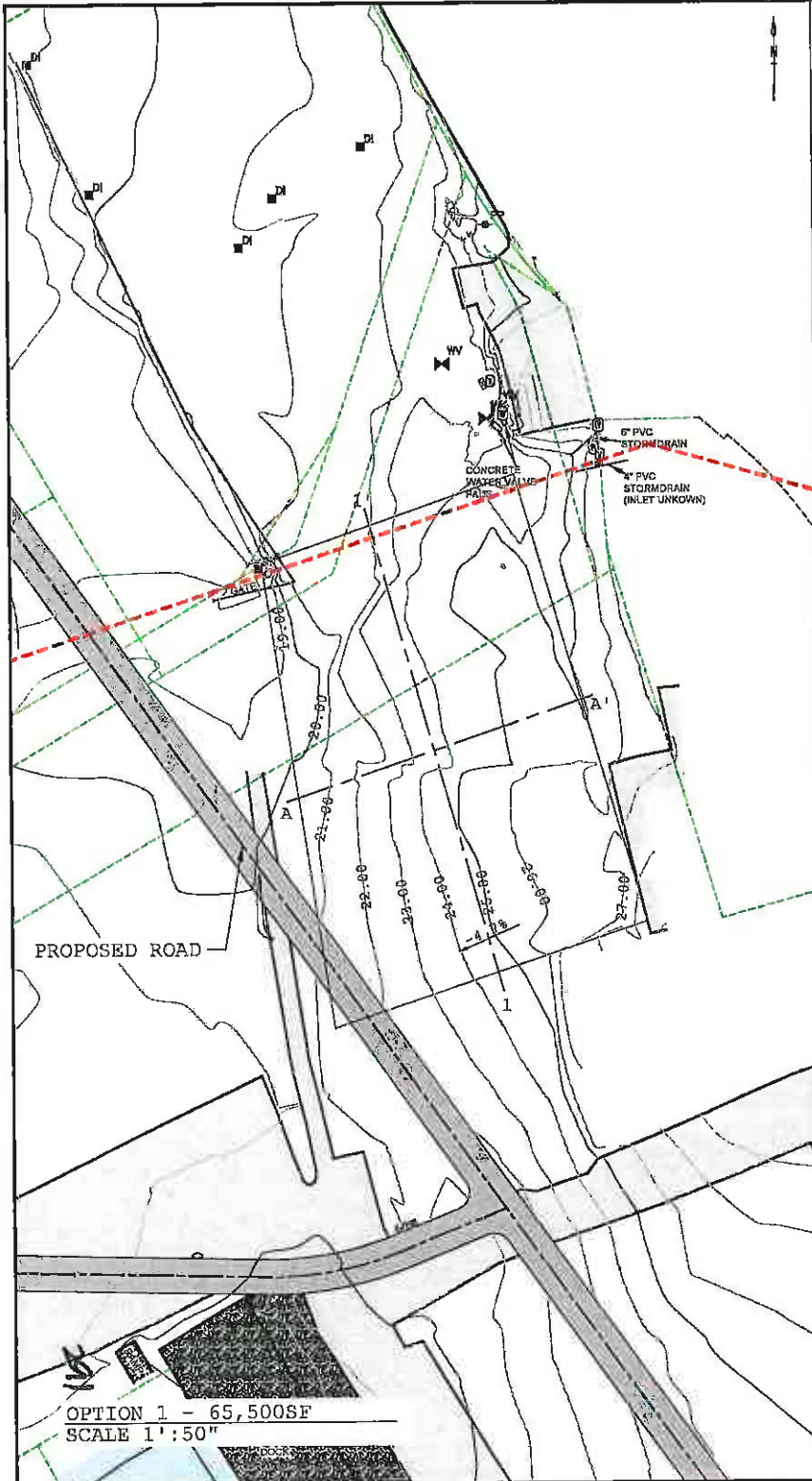


Date 04/04/2021  
Drawn By INFRADRAFT  
Sheet No. C-101  
File No. PB114

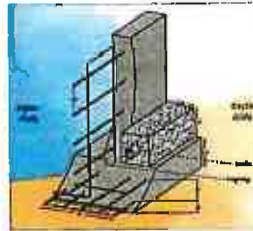
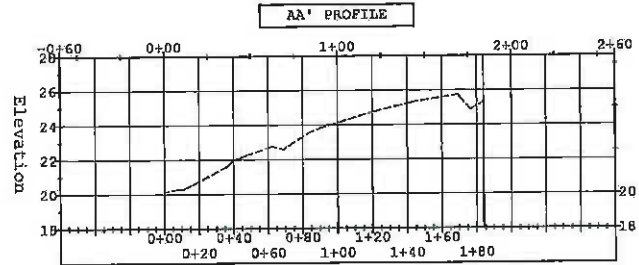
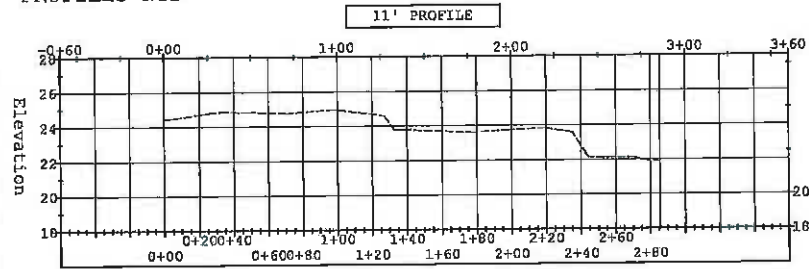
# NEW SEDIMENT STORAGE AREA

AREA: 45,185SF

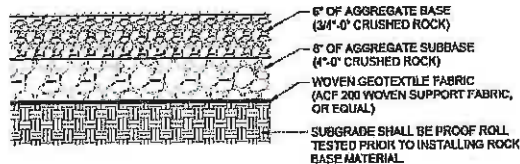
APPROX. STORAGE CAPACITY  
7,350 cu.yards



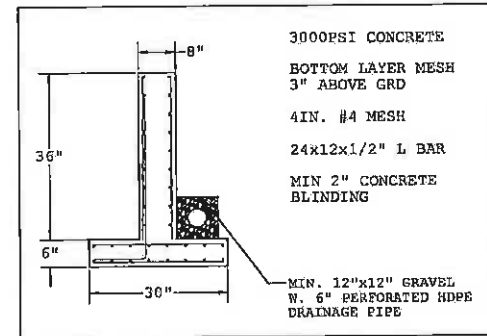
PROFILES NTS



RETAINING WALL  
DETAIL NTS



SUB-GRADE  
PREPARATION DETAIL



REINFORCED CONCRETE  
RETAINING WALL DETAIL



ENGINEER:

NO.	DATE	REVISION










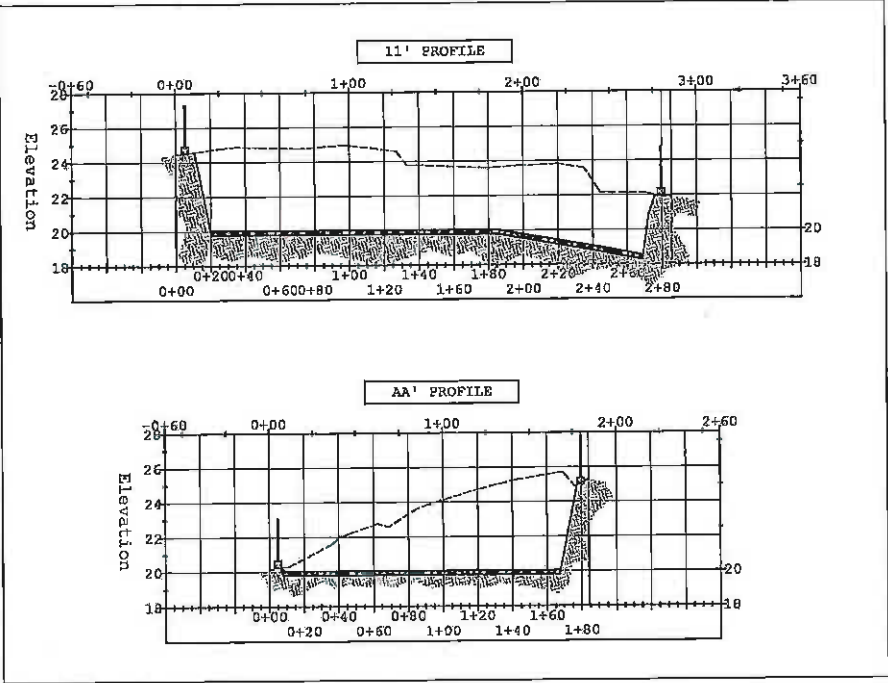
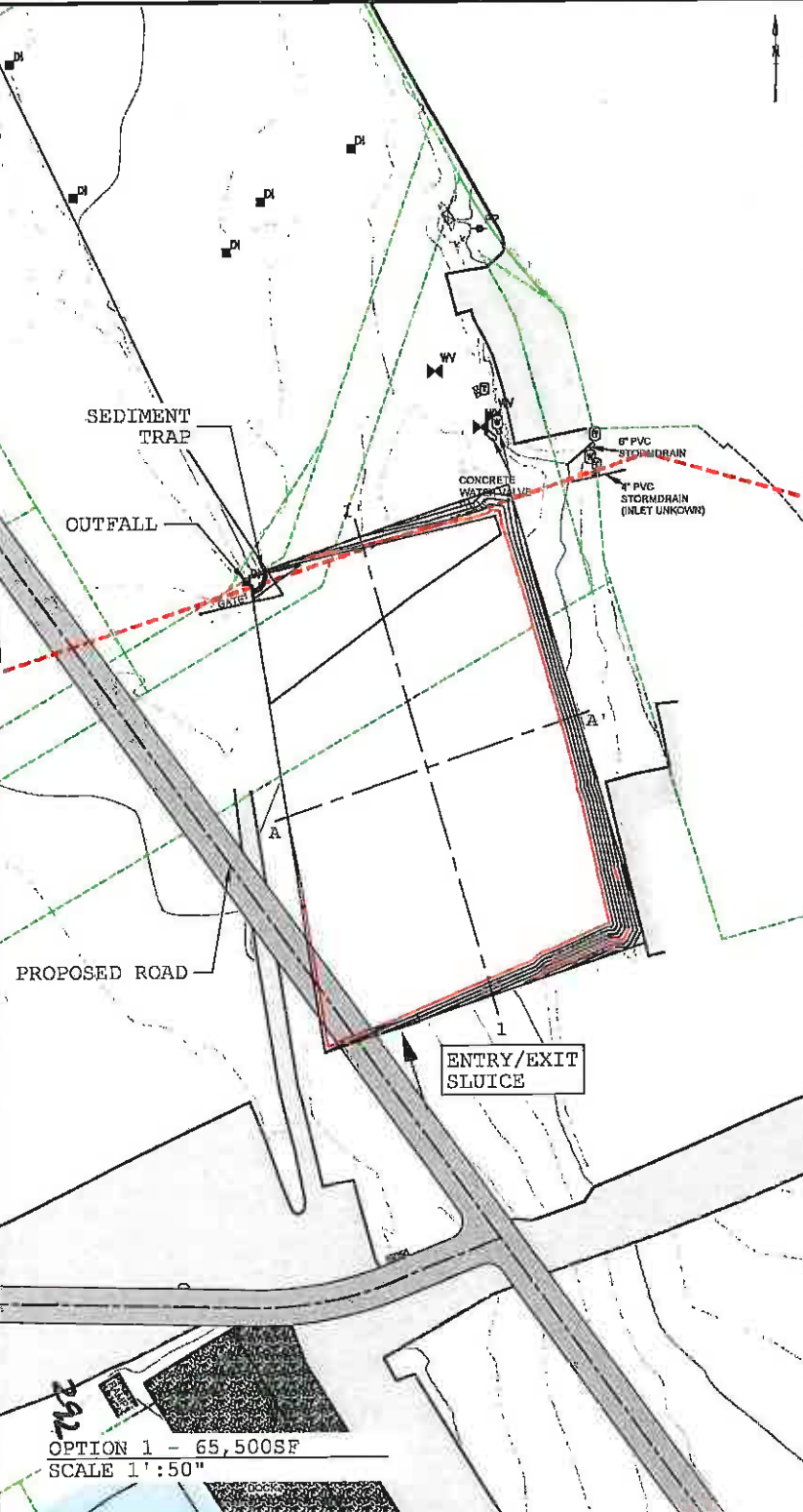
PREPARED FOR:  
**PORT OF BROOKINGS**  
7638D Lower Harbor Rd, Brookings, OR 97415

Lot 2800, MAP '36052803'  
Date: 04/04/2021  
Drawn By: INFRA DRAFT  
Sheet No.: C-102  
File No.: PB114

OPTION 1 - 65,500SF  
SCALE 1' : 50"

# NEW SEDIMENT STORAGE AREA

- LEGEND**
-  6" AGGREGATE BASE
  -  3/4"-0" CRUSHED ROCK
  -  8" AGGREGATE SUBBASE
  -  4" 0" CRUSHED ROCK
  -  WOVEN GEOTEXTILE FABRIC ACF200
  -  PROOF ROLLED SUBGRADE
  -  ENGINEERED FILL



SEDIMENT STORAGE GRADING  
NTS

OPTION 1 - 65,500SF  
SCALE 1" = 50'



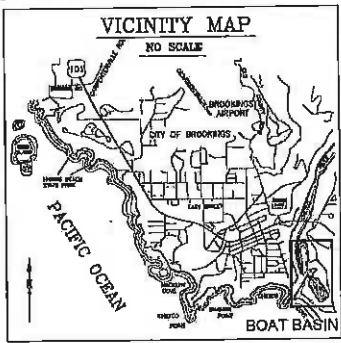
NO.	DATE	REVISION



PREPARED FOR: (LOT 2000, MAP '3605220B')  
**PORT OF BROOKINGS**  
16350 Lower Harbor Rd, Brookings, OR 97415



Date: 04/04/2021  
Drawn By: INFRADRAFT  
Sheet No.: C103  
File No.: PB114



PORT  
OF  
BROOKINGS  
HARBOR



PORT OF BROOKINGS-HARBOR  
2021 CIVIL IMPROVEMENTS

PROPOSED ROAD

**NATURAL FEATURES**  
EXISTING NATURAL RESOURCES OR NATURAL HAZARDS ON THE SUBJECT PROPERTY, INCLUDING WETLANDS, STREAMS, RIPARIAN AREAS, FLOOD PLAINS, OR FLOODWAYS TO BE DETERMINED BY ENGINEER

**EXISTING TREE CANOPY**  
THERE ARE NO EXISTING TREES ON THE SUBJECT PROPERTY

**CULTURAL RESOURCES**  
LOCALLY, OR FEDERALLY DESIGNATED HISTORIC AND/OR CULTURAL RESOURCES ON THE SITE OR ON ADJACENT PARCELS TO BE DETERMINED BY ENGINEER.

**PUBLIC SERVICES**  
PUBLIC UTILITY SERVICES, INCLUDING WATER, SEWER, STORM DRAINAGE, POWER, TELEPHONE, CABLE INTERNET, AND GAS ARE AVAILABLE TO THE SUBJECT PROPERTY.

**UTILITY STATEMENT**  
EXISTING UNDERGROUND UTILITIES ILLUSTRATED IN THESE PLANS ARE APPROXIMATED BASED ON MAPS OBTAINED FROM CURRY COUNTY GIS ELEVATIONS ESTIMATES, OR HAVE BEEN LOCATED BY A UTILITY LOCATE COMPANY. LAYOUT INDICATED IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. ALL LINES WITHIN PROJECTED WORK ZONE SHALL BE FIELD VERIFIED AS REQUIRED PRIOR TO CONSTRUCTION.

**PROJECT DESCRIPTION**

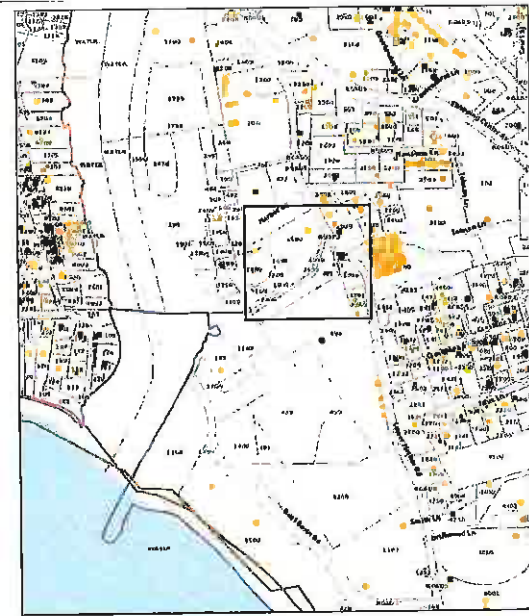
TITLE: PROPOSED ROAD  
REFERENCE: 140  
LOCATION: HARBOR ST  
TAX LOT(S): 2500, 2600, 2700, 2800  
2900, 2999, 402

**DRAWING REGISTER**

140-CV COVER SHEET  
140-C100 NOTES  
140-C101 EXISTING CONDITIONS  
140-C102 PROPOSED GRADING  
140-C103 PROPOSED PAVING  
140-C104 PROPOSED DRAINAGE  
140-C105 DETAILS  
140-C106 DETAILS



PROJECT OVERVIEW  
SCALE 1" : 200'



PORT OF BROOKINGS HARBOR  
MAP OF TAX LOTS

**PRELIM GRADING NOTES**

1. DEQ 1200-C PERMIT IS REQUIRED.
2. UNLESS DIRECTED OTHERWISE, REMOVE CLEARED AND GRUBBED MATERIAL FROM THE SITE AND DISPOSE AT AN APPROVED LOCATION.
3. PRIOR TO THE START OF CONSTRUCTION, VERIFY GRADES AT SAWCUT LOCATIONS AND MATCHING OF EXISTING GRADE LOCATIONS.
4. MINIMIZE TRAFFIC ON SOIL AREAS DURING WET WEATHER. IF THE SITE SOILS ARE EXPOSED DURING WET WEATHER, THE USE OF CRUSHED ROCK PLACED AS ENGINEERED FILL IN THE BOTTOM OF THE EXCAVATIONS MAY BE NECESSARY TO PROTECT THE SUBGRADE. TAKE ALL PRECAUTIONS TO LIMIT SURFACE DISTURBANCE AND PROTECT THE SITE GRADING AREA FROM EROSION AND RUNOFF.
5. UNLESS OTHERWISE NOTED, THE SAMPLING AND TESTING OF MATERIALS FOR USE ON THE JOBSITE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. ALL TESTING OF MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY A CERTIFIED TESTER. RESULTS OF THE TESTS SHALL BE SENT DIRECTLY TO THE PROJECT ENGINEER AS WELL AS THE CONTRACTOR, BY THE LABORATORY. LOCATION AND FREQUENCY OF TESTS SHALL BE DESIGNATED BY THE GENERAL CONTRACTOR.
6. ALL CUT AND FILL SLOPES SHALL BE MAXIMUM OF 2:1.

LEGEND	
5	ELEVATION
---	SUBGRADE MINOR CONTOUR
---	SUBGRADE MAJOR CONTOUR
---	PARCEL
---	GEOTEKSTILE
---	CONCRETE PAD
---	GRASS
---	JETTY
---	SLIP WAY
---	PAVED ROAD



ENGINEER: **EMC** ENGINEERS  
16330 Lower Harbor Rd, Brookings, OR 97415

NO.	DATE	BY

PREPARED FOR: (LOT 2800, MAP 38052308)  
**PORT OF BROOKINGS**  
16330 Lower Harbor Rd, Brookings, OR 97415

Date: 04/04/2021  
Drawn By: INFRADRIFT  
Sheet No.: CV  
File No.: 140

**GRADING NOTES**

1. PRIOR TO THE CONSTRUCTION OF EMBANKMENTS, THE CONTRACTOR SHALL EXCAVATE UNSUITABLE FOUNDATION MATERIAL. BASEMENTS, TRENCHES AND HOLES ENCOUNTERED WITHIN EMBANKMENT LIMITS SHALL BE FILLED WITH APPROVED MATERIAL. PRIOR TO BACKFILLING THE CONTRACTOR SHALL BREAK CONCRETE FLOORS OF BASEMENTS AS DIRECTED. THE CONTRACTOR SHALL BREAK UP AND ROUGHEN THE GROUND SURFACE BEFORE EMBANKMENTS MATERIAL IS PLACED THE NATURAL GROUND UNDERLYING EMBANKMENTS SHALL BE COMPACTED TO THE DENSITY SPECIFIED FOR THE EMBANKMENT MATERIALS TO BE PLACED, AND TO THE DEPTH OF THE GRUBBING OR A MINIMUM OF 6 INCHES.
2. EMBANKMENT CONSTRUCTION SHALL INCLUDE PREPARATION OF THE AREAS UPON WHICH EMBANKMENTS ARE PLACED, THE PLACEMENT AND COMPACTION OF APPROVED EMBANKMENT MATERIALS AND FILLING OF HOLES, PITS AND OTHER DEPRESSIONS WITHIN THE SUBDIVISION.
3. THE CONTRACTOR SHALL PLACE EMBANKMENTS AND FILLS IN THE HORIZONTAL LAYERS OF 8 INCHES MAXIMUM DEPTH AND COMPACT EACH LAYER TO THE DENSITY SPECIFIED.
4. EMBANKMENT SHALL NOT BE CONSTRUCTED WHEN THE EMBANKMENT MATERIAL OR THE FOUNDATION ON WHICH THE EMBANKMENT WOULD BE PLACED IS FROZEN.
5. IMMEDIATELY PRIOR TO COMPLETION OF THE EARTHWORK, THE CONTRACTOR SHALL CLEAN THE ENTIRE WORK AREA OF DEBRIS AND FOREIGN MATTER.
6. THE MAXIMUM DENSITY OF COMPACTED MATERIAL WILL BE DETERMINED BY AASHTO T-99
7. THE CONTRACTOR SHALL COMPACT ALL EMBANKMENTS, FILLS AND BACKFILLS TO A MINIMUM IN PLACE DENSITY OF 95 PERCENT.
8. THE CONTRACTOR SHALL WATER THE MATERIALS TO PROVIDE OPTIMUM MOISTURE FOR COMPACTION OF EMBANKMENT AND BACKFILLS. EMBANKMENTS OR BACKFILL MATERIALS SHALL NOT BE PLACED IN FINAL POSITION UNTIL MOISTURE IN EXCESS OF OPTIMUM MOISTURE HAS BEEN REMOVED.
9. IF THE SPECIFIED COMPACTION IS NOT OBTAINED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER. THE CONTRACTOR MAY BE REQUIRED TO USE A MODIFIED COMPACTION PROCEDURE OR APPLY ADDITIONAL COMPACTION EFFORT. IF APPROVED MATERIALS MEETING THE SPECIFICATIONS CANNOT BE COMPACTED TO THE REQUIRED DENSITY REGARDLESS OF COMPACTION EFFORT OR METHOD, THE ENGINEER MAY REDUCE THE REQUIRED DENSITY OR DIRECT THE ALTERNATE MATERIALS BE USED. IN NO CASE SHALL EARTHWORK OPERATIONS PROCEED UNTIL THE CONTRACTOR IS ABLE TO COMPACT THE MATERIAL TO THE SATISFACTION OF THE ENGINEER.
10. DEQ 1200-C PERMIT IS NOT REQUIRED.
11. UNLESS DIRECTED OTHERWISE, REMOVE CLEARED AND GRUBBED MATERIAL FROM THE SITE AND DISPOSE AT AN APPROVED LOCATION.
12. UNLESS OTHERWISE NOTED, THE SAMPLING AND TESTING OF MATERIALS FOR USE ON THE JOBSITE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. ALL TESTING OF MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY A CERTIFIED TESTER. RESULTS OF THE TESTS SHALL BE SENT DIRECTLY TO THE PROJECT ENGINEER AS WELL AS THE CONTRACTOR, BY THE LABORATORY. LOCATION AND FREQUENCY OF TESTS SHALL BE DESIGNATED BY THE GENERAL CONTRACTOR.
13. ALL CUT AND FILL SLOPES SHALL BE MAXIMUM OF 2:1.

**GEOTECHNICAL NOTE**

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE PROJECT ENGINEER FOR REQUIRED REMEDIATION. THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT ENGINEER FOR REQUIRED SITE OBSERVATIONS AND TESTING OF ALL FILLS.

294  
 GENERAL NOTES  
 NO SCALE

ENGINEER:



PREPARED FOR:  
**PORT OF BROOKINGS**  
 16990 Lower Harbor Rd, Brookings, OR 97415

Date: 04/04/2021  
 Drawn By: INFRADRAFT  
 Sheet No.: C-100  
 File No.: 140

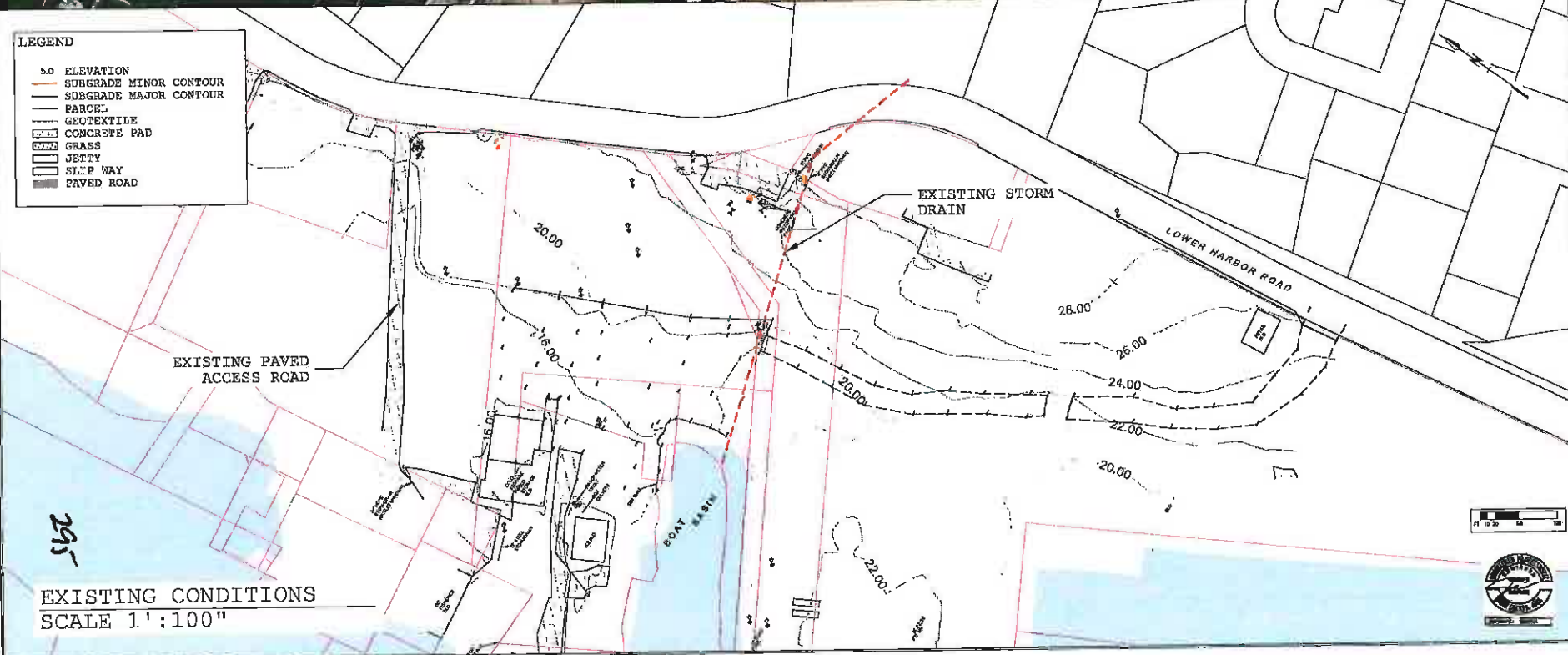
LOT 3500, MAP '300522D8'  
 PORT OF BROOKINGS  
 NUMBER

REV	REVISION	DATE	BY






- LEGEND**
- 5.0 ELEVATION
  - SUBGRADE MINOR CONTOUR
  - SUBGRADE MAJOR CONTOUR
  - PARCEL
  - GEOTEXTILE
  - CONCRETE PAD
  - GRASS
  - JETTY
  - SLIP WAY
  - PAVED ROAD



295  
 EXISTING CONDITIONS  
 SCALE 1':100"



NO.	DATE	REVISION



PREPARED FOR: (LOT 2900, MAP 30082205)  
**PORT OF BROOKINGS**  
 16350 Lower Harbor Rd, Brookings, OR 97415

Date 04/04/2021  
 Drawn By INFRADRAFT  
 Sheet No. C-101  
 File No. 140



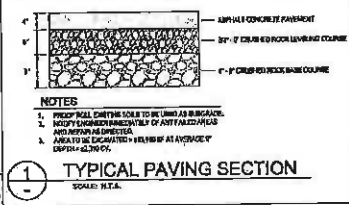


**LEGEND**

- 5.0 ELEVATION
- SUBGRADE MINOR CONTOUR
- SUBGRADE MAJOR CONTOUR
- PARCEL
- GEOTEXTILE
- CONCRETE PAD
- GRASS
- JETTY
- SLIP WAY
- PAVED ROAD

EXCAVATE SUBGRADE TO ±1.5' BELOW TOP OF CONC AND TOP OF BANK ELEVATION

PROPOSED SEDIMENT STOCKPILE AREA (GRADED, UNPAVED)



EXCAVATE SUBGRADE TO 1.5' BELOW EXISTING ROAD

EXISTING PAVED ACCESS ROAD

OPERATIONS AREA

EXCAVATE SUBGRADE TO ±1.5' BELOW TOP OF CONC AND TOP OF BANK ELEVATION

LOWER HARBOR RD

256  
GRADING PLAN  
SCALE 1":100"

**EARTHWORK REPORT**

Name	Type	Cut Factor	Fill Factor	Vol. Area (Cu Yd)	Cut (Cu Yd)	Fill (Cu Yd)	Net (Cu Yd)
ISOBRACH	Sub	1.000	1.000	3742.50	3289.67	0.00	3289.67



ENGINEER:  
**EMC**  
Civil & Mechanical Engineers, Inc.  
10000 Lower Harbor Rd., Brookings, OR 97415  
Phone: 541-338-2200  
Fax: 541-338-2201  
www.emc-engineers.com

No.	DATE	REVISION

PREPARED FOR:  
**PORT OF BROOKINGS**  
16500 Lower Harbor Rd., Brookings, OR 97415

DATE: 04/04/2021  
DRAWN BY: INFRADRAFT  
SHEET NO.: C-102  
FILE NO.: 140



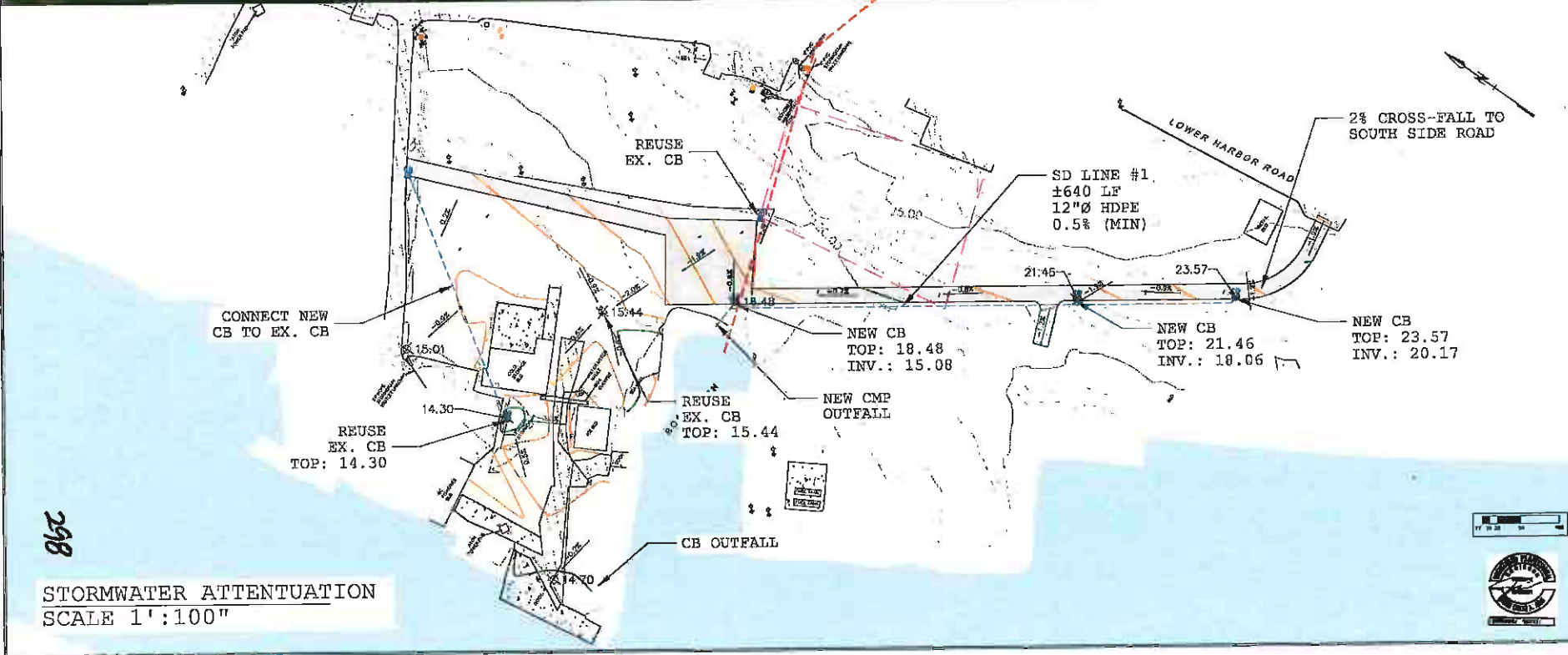




NO.	DATE	REVISION	BY



PREPARED FOR: (LOT 2900, MAP '3605228B')  
**PORT OF BROOKINGS**  
 16350 Lower Harbor Rd., Brookings, OR 97415

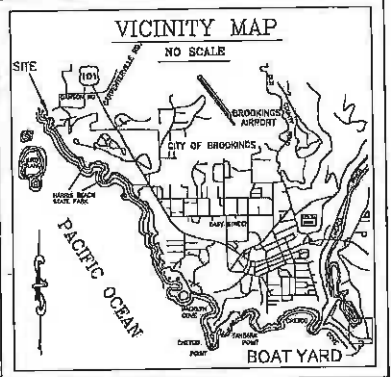


298

STORMWATER ATTENUATION  
 SCALE 1"=100'



Date	04/04/2021
Drawn By	INFRADRAFT
Sheet No.	C-104
File No.	140



**GRADING NOTES**

1. PRIOR TO THE CONSTRUCTION OF EMBANKMENTS, THE CONTRACTOR SHALL EXCAVATE UNSUITABLE FOUNDATION MATERIAL, BASEMENTS, TRENCHES AND HOLES ENCOUNTERED WITHIN EMBANKMENT LIMITS SHALL BE FILLED WITH APPROVED MATERIAL. PRIOR TO BACKFILLING THE CONTRACTOR SHALL BREAK CONCRETE FLOORS OF BASEMENTS AS DIRECTED. THE CONTRACTOR SHALL BREAK UP AND ROUND THE GROUNDSURFACE BEFORE EMBANKMENTS MATERIAL IS PLACED. THE MATERIAL COVERED UNDERBY THE EMBANKMENTS SHALL BE COMPACTED TO THE DENSITY SPECIFIED FOR THE EMBANKMENT MATERIAL TO BE PLACED, AND TO THE DEPTH OF THE EXISTING OR A HEIGHT OF 4 INCHES.
2. EMBANKMENT CONSTRUCTION SHALL INCLUDE PREPARATION OF THE AREAS UPON WHICH EMBANKMENTS ARE PLACED, THIS INCLUDING AND COMPRISED OF APPROVED EMBANKMENT MATERIAL AND FILL OF TRENCHES AND OTHER DEPRESSIONS WITHIN THE EMBANKMENT.
3. THE CONTRACTOR SHALL PLACE EMBANKMENTS AND FILL IN THE HORIZONTAL LAYERS OF 2 INCHES MAXIMUM DEPTH AND CONTACT EACH LAYER TO THE DENSITY SPECIFIED.
4. EMBANKMENT SHALL NOT BE CONSTRUCTED WHEN THE EMBANKMENT MATERIAL OR THE FOUNDATION UPON WHICH THE EMBANKMENT IT WOULD BE PLACED IS FROZEN.
5. IMMEDIATE REMOVAL OF COMPACTED MATERIAL SHALL BE DETERMINED BY ASHED POP.
6. THE CONTRACTOR SHALL COMPACT ALL EMBANKMENTS, FILLS AND BACKFILLS TO A MINIMUM PLACE DENSITY OF 95 PERCENT.
7. IF THE CONTRACTOR SHALL WATER THE MATERIALS TO PROVIDE OPTIMAL MOISTURE FOR COMPACTION OF EMBANKMENT AND BACKFILLS, EMBANKMENTS OR BACKFILL MATERIALS SHALL NOT BE PLACED IN PRAIRY PORTION UNLESS MOISTURE IN EXCESS OF OPTIMUM MOISTURE HAS BEEN REMOVED.
8. IF THE SPECIFIED COMPACTIONS NOT OBTAINED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER. THE CONTRACTOR MAY BE REQUIRED TO USE A MODIFIED COMPACTION PROCEDURE OR APPLY ADDITIONAL COMPACTION EFFORT. IF APPROVED MATERIALS MEETING THE SPECIFIED DENSITY CANNOT BE COMPACTED TO THE REQUIRED DENSITY BY REASON OF COMPACTION EFFORT OR METHOD, THE ENGINEER MAY REDUCE THE REQUIRED DENSITY OR DIRECT THE ALTERNATE MATERIALS BE USED. IN NO CASE SHALL EXISTING CONDITIONS PRECEDE INTO THE CONSTRUCTION IF ABLE TO COMPACT THE MATERIAL TO THE SATISFACTION OF THE ENGINEER.
9. DIRT WORK IS PRIMARY IS REQUIRED.
10. UNLESS DIRECTED OTHERWISE, REMOVE CLEARING AND GRUBBED.
11. MATERIAL FROM THE SITE AND DISPOSE AT AN APPROVED LOCATION. UNLESS OTHERWISE NOTED, THE SAMPLE AND TESTS OF MATERIALS FOR USE ON THE JOBSITE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. ALL TESTS OF MATERIALS AND WORKMANSHIP SHALL BE PROVIDED BY A CERTIFIED TESTER. RESULTS OF THE TESTS SHALL BE SENT DIRECTLY TO THE PROJECT ENGINEER AS WELL AS THE CONTRACTOR, BY THE LABORATORY. LOCATION AND FREQUENCY OF TESTS SHALL BE DETERMINED BY THE GENERAL CONTRACTOR.
12. ALL CUT AND FILL SLOPES SHALL BE MAINTAINED AT 2:1.

**GEOTECHNICAL NOTE**

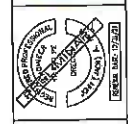
THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE PROJECT ENGINEER FOR REQUIRED PREPARATION. THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT ENGINEER FOR REQUIRED SITE OBSERVATIONS AND TESTING OF ALL FILLS.

**SHEET INDEX**

- C1.0 COVER SHEET
- C2.0 EXISTING CONDITIONS
- C2.1 GRADING PLAN
- C2.2 FINISHED AND GRADE
- C3.0 PAVEMENT AREA
- C4.0 STORMWATER CONVEYANCE
- C4.1 STORMWATER CONVEYANCE PROFILE
- C5.0 NOT USED
- C5.1 PROJECT DETAILS
- C5.1 PROJECT DETAILS

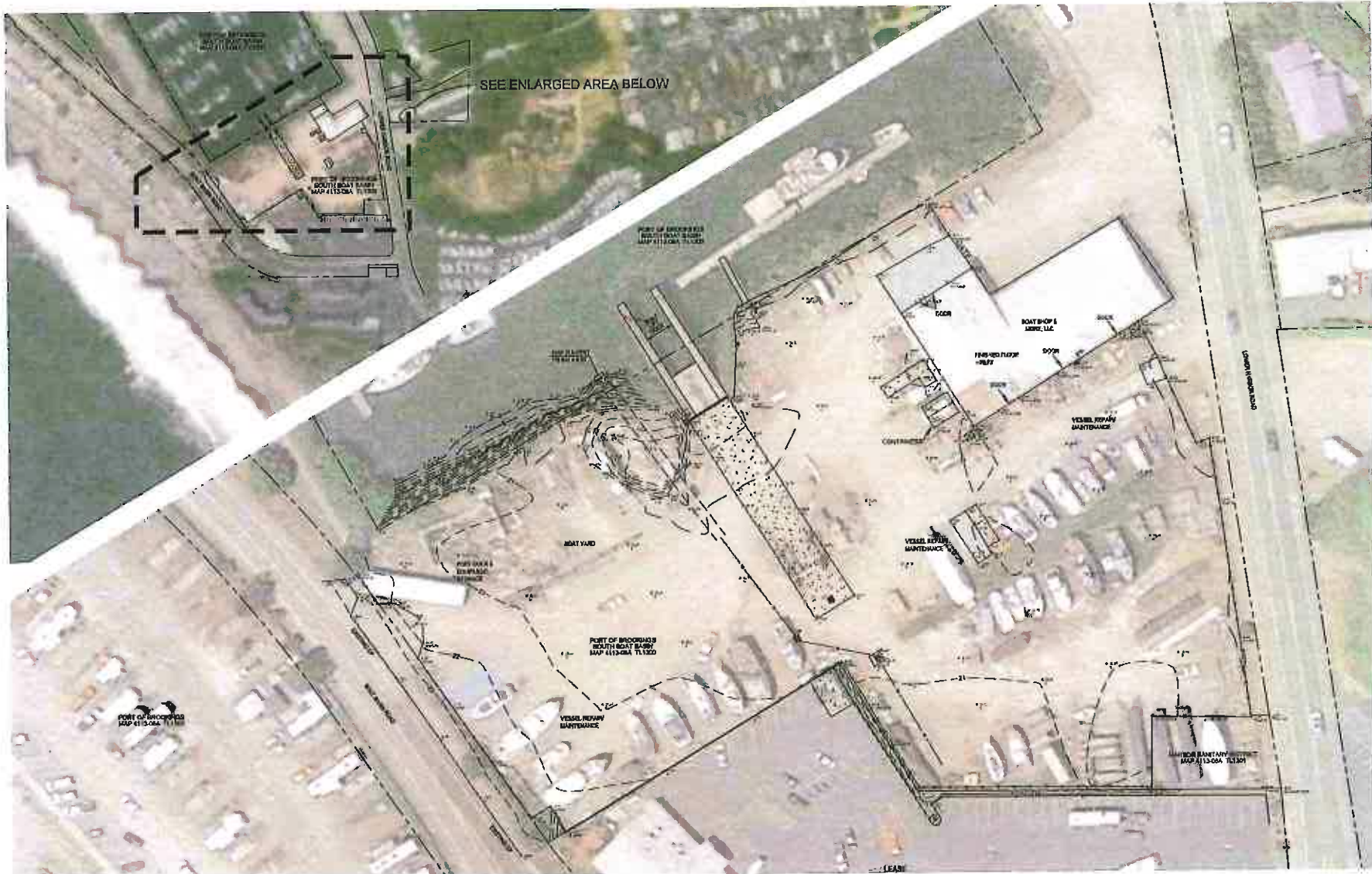
REVISIONS	BY:

Grants Park • Johnson • Mitchell, OR  
 20000 Highway 101, Brookings, OR 97515  
 Phone: 541-338-2222  
 Fax: 541-338-2223  
 Engineers & Architects, LLC



**PORT OF BROOKINGS HARBOR**  
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97515  
**BOAT YARD PAVING**

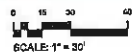
DRAWN BY: JCI  
 DATE: 11 MAY 2021  
 JOB No: #  
 SHEET No:  
**C1.0**  
 COVER SHEET



**SURVEY BY**  
 ROBERTS & ASSOCIATES LAND SURVEYING, INC.  
 111 SERVICE STREET  
 BROOKINGS, OR 97415  
 (541) 862-4162

**HORIZONTAL DATUM**  
 NAD83 GEODETIC REFERENCE SYSTEM (GRS80) CONST  
 ZONE 10, NAD83 STATE PLANE COORDINATE SYSTEM  
 724-000-0001 STATE PLANE COORDINATE METERS  
 CONTAINED TO THE OREGON REAL-TIME CORS REFERENCE  
 NETWORK (ORRN) REFERENCED TO NAD 83(11) LOCAL GRID,  
 INTERNATIONAL FEET, WITH A RELATIVE ACCURACY OF 45MM.

**VERTICAL DATUM**  
 ELEVATIONS TO THE VERTICAL DATUM SHALL  
 BE IN FEET AND DECIMALS THEREOF. BENCH  
 MARKS UTILIZED FOR THIS SURVEY  
 US ARMY CORPS OF ENGINEERS  
 BENCH MARK - 1508.27  
 ELEVATION - 31.68 FEET



**EXISTING CONDITIONS**  
 SCALE: 1" = 50' (4:00)



REVISIONS	BY:

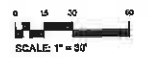
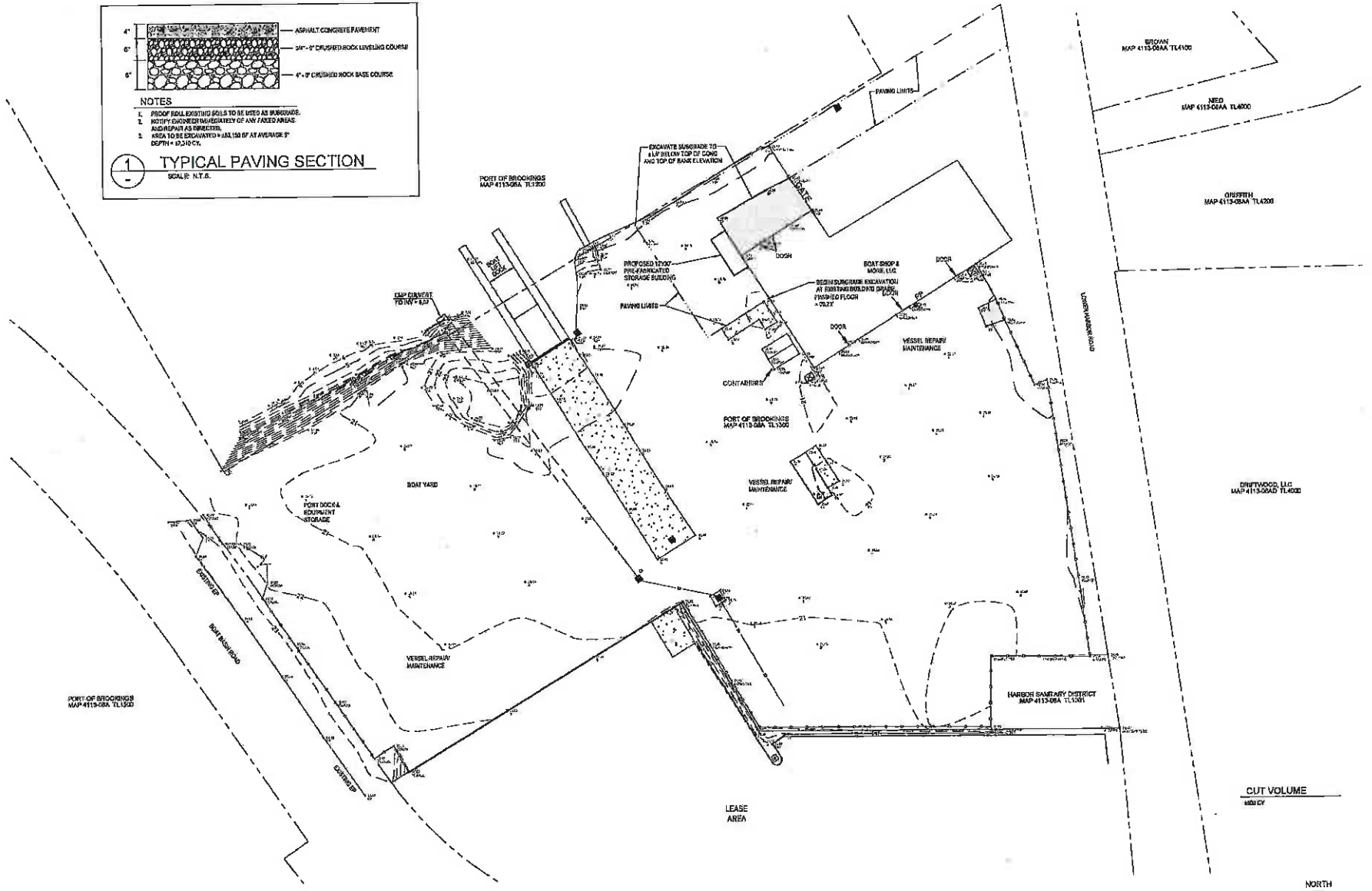
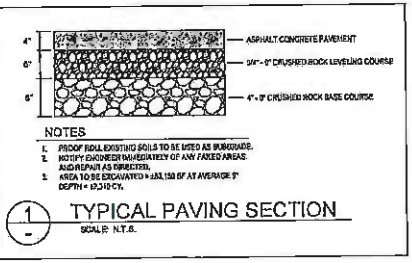
Grants Pass • Jacksonville • Medford, OR  
 1000 Commercial Street, Suite 200, Grants Pass, OR 97526  
 Phone: (541) 862-4162 • Fax: (541) 862-4163  
[www.emc-engineers.com](http://www.emc-engineers.com)  
**EMC** Engineers/Scientists, LLC



**PORT OF BROOKINGS HARBOR**  
 16330 LOWER HARBOR (REAR) BROOKINGS, OR 97415  
**BOAT YARD PAVING**

DRAWN BY: JG  
 DATE: 11 MAY 2024  
 JOB No: #  
 SHEET No:  
**C2.0**  
 EXISTING  
 CONDITIONS

300



**GRADING PLAN**  
SCALE: 1" = 30' (PLAN)



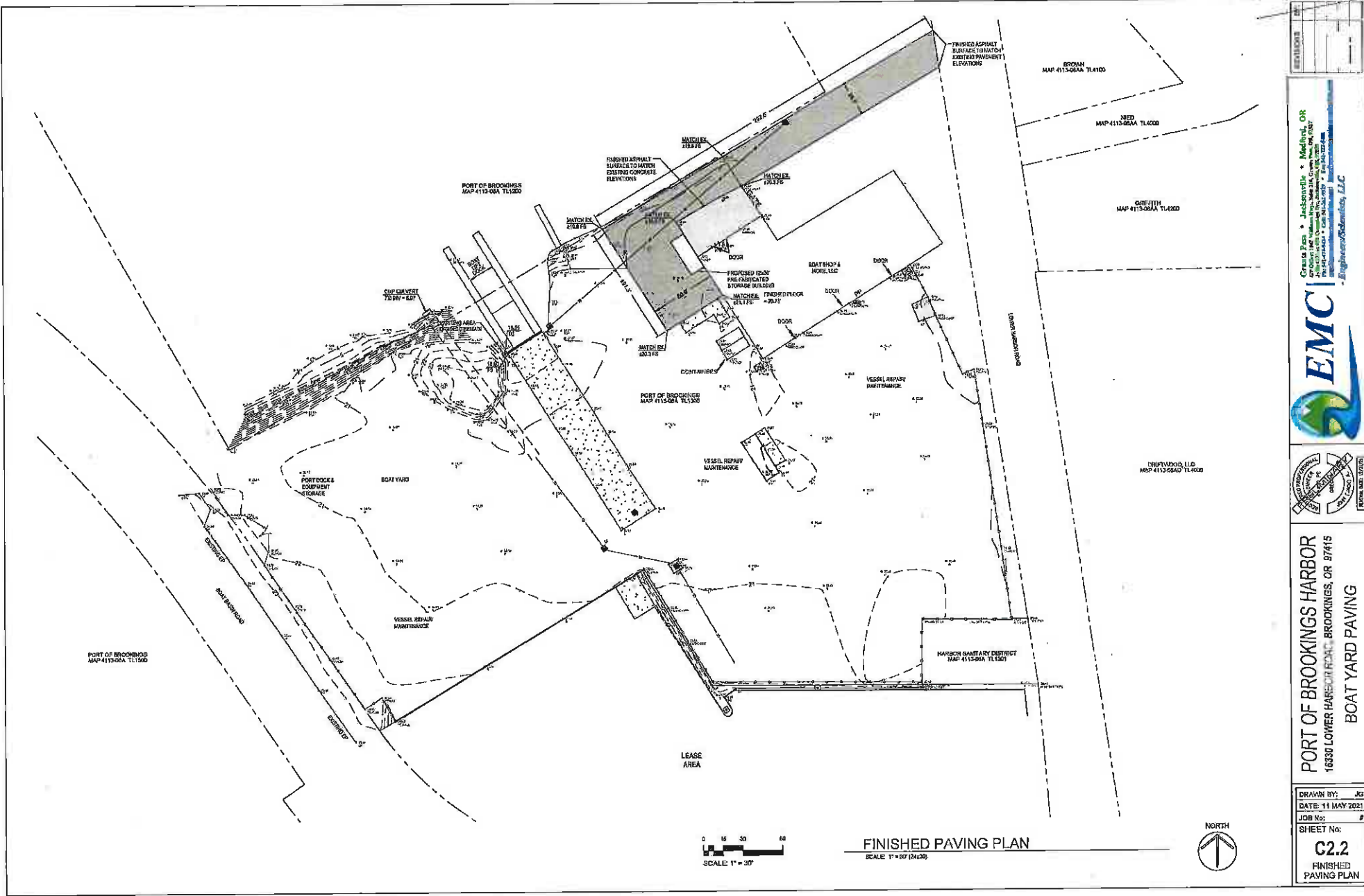
NO.	REVISIONS

Grants Pass • Jacksonville • Medford, OR  
 16330 Lower Harbor Road, Brookings, OR 97615  
 Phone: 541-338-2222 • Fax: 541-338-2223  
 www.emcinc.com • Email: info@emcinc.com



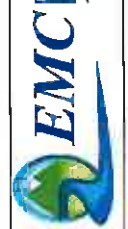
**PORT OF BROOKINGS HARBOR**  
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97615  
**BOAT YARD PAVING**

DRAWN BY: JG  
 DATE: 11 MAY 2021  
 JOB No: 0  
 SHEET No:  
**C2.1**  
 GRADING PLAN



DATE	11/15/2021
BY	JCS

Credits: Pico • Jacksonville • Medford, OR  
 or contact: 1847 1/2 Highway 100, Brookings, OR 97415  
 Phone: 541-338-2222 • Fax: 541-338-2222  
 Email: info@emcinc.com • Website: www.emcinc.com



**PORT OF BROOKINGS HARBOR**  
**16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415**  
**BOAT YARD PAVING**

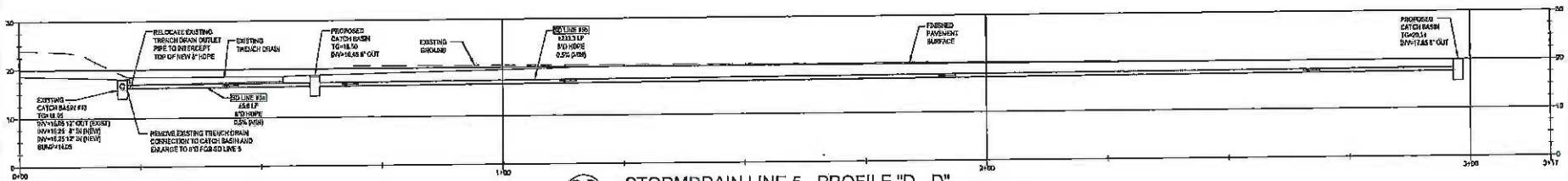
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 JOB No: #  
 SHEET No:  
**C2.2**  
 FINISHED PAVING PLAN







305



**D-D** STORMDRAIN LINE 5 - PROFILE "D - D"  
SCALE: 1" = 10' (V & H)

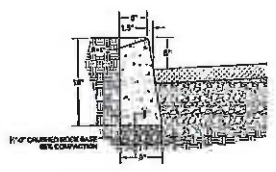
NO.	DATE	BY	REVISIONS

Grant Paas • Architects, PLLC • Portland, OR  
 1000 NE Oregon Street, Suite 200  
 Portland, OR 97232  
 Phone: 503.255.1111  
 Fax: 503.255.1112  
 www.grantpaas.com

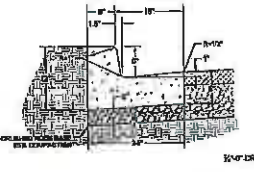


**PORT OF BROOKINGS HARBOR**  
 16300 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
**BOAT YARD PAVING**

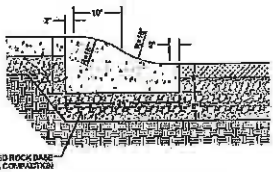
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 DATE: 11 MAY 2021  
 JOB No: #  
 SHEET No: #  
**C4.1**  
 STORMDRAIN  
 PROFILES



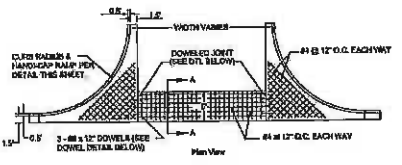
**301 VERTICAL CURB**  
SCALE: NTS



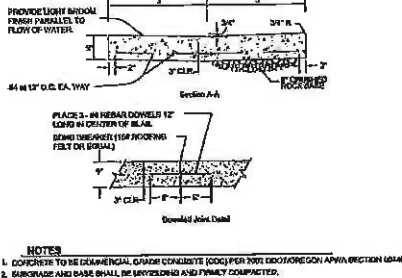
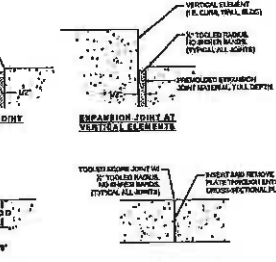
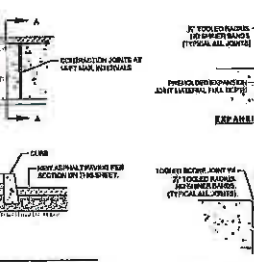
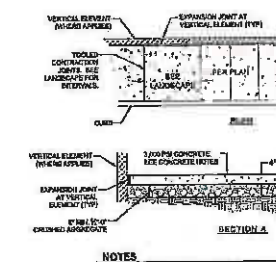
**302 CURB & GUTTER**  
SCALE: NTS



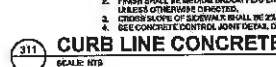
**303 ROLLED CURB**  
SCALE: NTS



**327 DRIVEWAY APRON WITH VALLEY GUTTER**  
SCALE: NTS



**NOTES**  
1. CONCRETE TO BE COMMERCIAL GRADE CONCRETE (3000) PER 100% DENSITY REGION APPROXIMATE 10:40:60.  
2. SUBGRADE AND BASE SHALL BE PREPARED AND FINISHED COMPACTED.  
3. VALLEY GUTTER SHALL HAVE A WIDTH TEST TO ASSURE FLOW.



**301 WHEEL STOP**  
SCALE: NTS



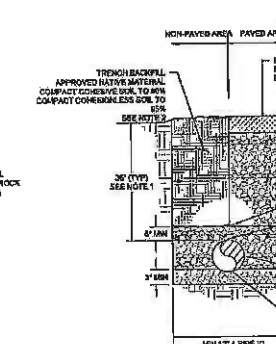
**302 CURB LINE CONCRETE SIDEWALK**  
SCALE: NTS



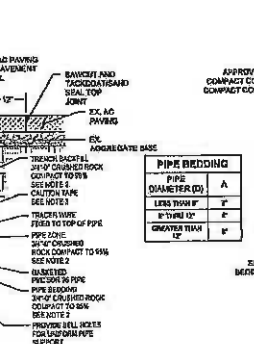
**303 CONCRETE CONTROL JOINTS**  
SCALE: NTS



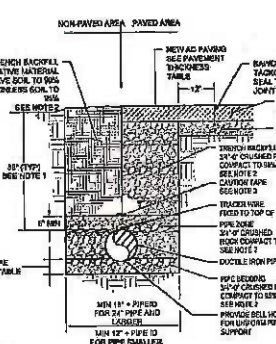
**327 DRIVEWAY APRON WITH VALLEY GUTTER**  
SCALE: NTS



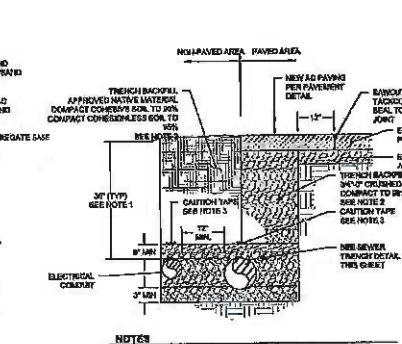
**301 WHEEL STOP**  
SCALE: NTS



**302 CURB LINE CONCRETE SIDEWALK**  
SCALE: NTS



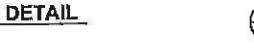
**303 CONCRETE CONTROL JOINTS**  
SCALE: NTS



**327 DRIVEWAY APRON WITH VALLEY GUTTER**  
SCALE: NTS



**308 CONDUIT TRENCH DETAIL**  
SCALE: NTS



**309 SEWER TRENCH DETAIL**  
SCALE: NTS



**309 WATER TRENCH DETAIL**  
SCALE: NTS



**308 JOINT TRENCH DETAIL**  
SCALE: NTS

**NOTES**  
1. COVER OVER PIPE SHALL VARY FROM 12\"/>

**NOTES**  
1. COVER OVER PIPE SHALL VARY FROM 12\"/>

**NOTES**  
1. COVER OVER PIPE SHALL VARY FROM 12\"/>

**NOTES**  
1. COVER OVER PIPE SHALL VARY FROM 12\"/>

**308 CONDUIT TRENCH DETAIL**  
SCALE: NTS

**309 SEWER TRENCH DETAIL**  
SCALE: NTS

**309 WATER TRENCH DETAIL**  
SCALE: NTS

**308 JOINT TRENCH DETAIL**  
SCALE: NTS

DATE	11 MAY 2021
DRAWN BY	JG
CHECKED BY	JG
PROJECT NO.	66.0
SHEET NO.	2

Grant Park • Jacksonville • Medford, OR  
 503-754-1111 • 503-754-1112 • 503-754-1113  
 503-754-1114 • 503-754-1115 • 503-754-1116  
 503-754-1117 • 503-754-1118 • 503-754-1119  
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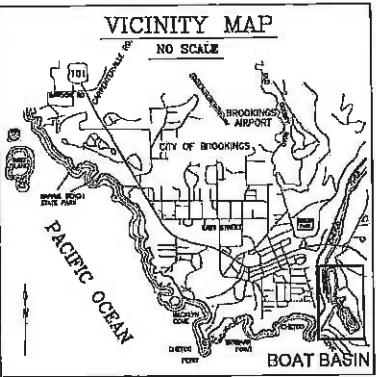


**PORT OF BROOKINGS HARBOR**  
 1630 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
**BOAT YARD PAVING**

DRAWN BY: JG  
 DATE: 11 MAY 2021  
 JOB No: #  
 SHEET No: #  
**66.0**  
 PROJECT  
 DETAILS

308



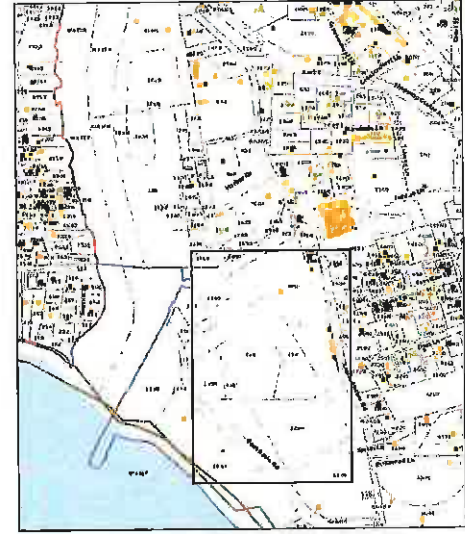


PORT OF BROOKINGS HARBOR



PORT OF BROOKINGS-HARBOR  
2021 CIVIL IMPROVEMENTS

**SOUTH BASIN EMBANKMENT RECONSTRUCTION**



PORT OF BROOKINGS HARBOR  
MAP OF TAX LOTS

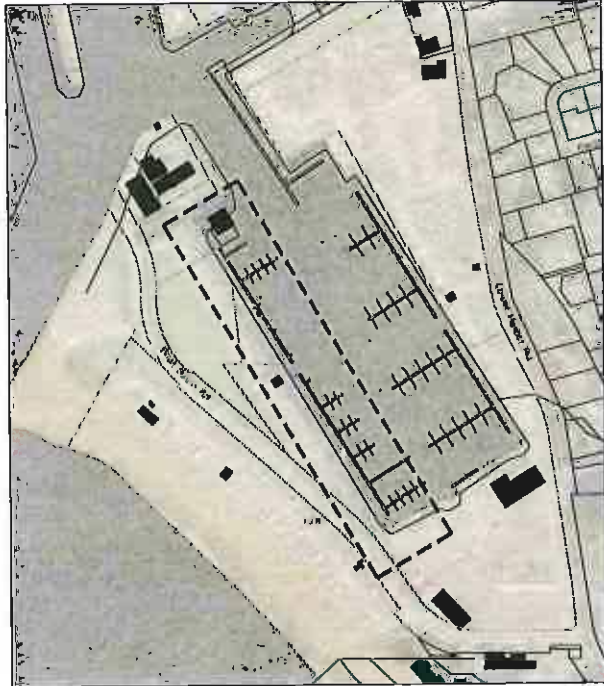
**NATURAL FEATURES**  
EXISTING NATURAL RESOURCES OR NATURAL HAZARDS ON THE SUBJECT PROPERTY, INCLUDING WETLANDS, STREAMS, RIPARIAN AREAS, FLOOD PLAINS, OR FLOODWAYS TO BE DETERMINED BY ENGINEER.

**EXISTING TREE CANOPY**  
THERE ARE NO EXISTING TREES ON THE SUBJECT PROPERTY

**CULTURAL RESOURCES**  
LOCALLY, OR FEDERALLY DESIGNATED HISTORIC AND/OR CULTURAL RESOURCES ON THE SITE OR ON ADJACENT PARCELS TO BE DETERMINED BY ENGINEER.

**PUBLIC SERVICES**  
PUBLIC UTILITY SERVICES, INCLUDING WATER, SEWER, STORM DRAINAGE, POWER, TELEPHONE, CABLE INTERNET, AND GAS ARE AVAILABLE TO THE SUBJECT PROPERTY.

**UTILITY STATEMENT**  
EXISTING UNDERGROUND UTILITIES ILLUSTRATED IN THESE PLANS ARE APPROXIMATED BASED ON MAPS OBTAINED FROM CURRY COUNTY GIS ELEVATIONS ESTIMATES, OR HAVE BEEN LOCATED BY A UTILITY LOCATE COMPANY. LAYOUT INDICATED IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. ALL LINES WITHIN PROJECTED WORK ZONE SHALL BE FIELD VERIFIED AS REQUIRED PRIOR TO CONSTRUCTION.



PROJECT OVERVIEW  
SCALE 1" : 200'

**PROJECT DESCRIPTION**  
TITLE: SOUTH BASIN EMBANKMENT RECONSTRUCTION  
REFERENCE: PB113  
LOCATION: SOUTH BASIN  
TAX LOT(S): 401,498,1100,1200,1300,1400

**DRAWING REGISTER**

PB113-C100	Cover sheet
PB113-C101	Notes
PB113-C102	Existing Condition
PB113-C102A	EXISTING EMBANKMENT VIEWS
PB113-C103	Embankment
PB113-C104	Details
PB113-C105	Plan details

- PRELIM GRADING NOTES**
1. DEQ 1200-C PERMIT IS REQUIRED.
  2. UNLESS DIRECTED OTHERWISE, REMOVE CLEARED AND GRUBBED MATERIAL FROM THE SITE AND DISPOSE AT AN APPROVED LOCATION.
  3. PRIOR TO THE START OF CONSTRUCTION, VERIFY GRADES AT SAWCUT LOCATIONS AND MATCHING OF EXISTING GRADE LOCATIONS.
  4. MINIMIZE TRAFFIC ON SOIL AREAS DURING WET WEATHER. IF THE SITE SOILS ARE EXPOSED DURING WET WEATHER, THE USE OF CRUSHED ROCK PLACED AS ENGINEERED FILL IN THE BOTTOM OF THE EXCAVATIONS MAY BE NECESSARY TO PROTECT THE SUBGRADE. TAKE ALL PRECAUTIONS TO LIMIT SURFACE DISTURBANCE AND PROTECT THE SITE GRADING AREA FROM EROSION AND RUNOFF.
  5. UNLESS OTHERWISE NOTED, THE SAMPLING AND TESTING OF MATERIALS FOR USE ON THE JOBSITE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. ALL TESTING OF MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY A CERTIFIED TESTER. RESULTS OF THE TESTS SHALL BE SENT DIRECTLY TO THE PROJECT ENGINEER AS WELL AS THE CONTRACTOR, BY THE LABORATORY. LOCATION AND FREQUENCY OF TESTS SHALL BE DESIGNATED BY THE GENERAL CONTRACTOR.
  6. ALL CUT AND FILL SLOPES SHALL BE MAXIMUM OF 2:1.

**LEGEND**

—	ELEVATION
- - -	SUBGRADE MINOR CONTOUR
- - -	SUBGRADE MAJOR CONTOUR
- - -	PARCEL
- - -	GEOTENTILE
▨	CONCRETE PAD
▨	GRASS
▨	JETTY
▨	SLIP WAY
▨	PAVED ROAD



DATE	12/8/2020
BY	INFRADRAFT
NO.	C-100



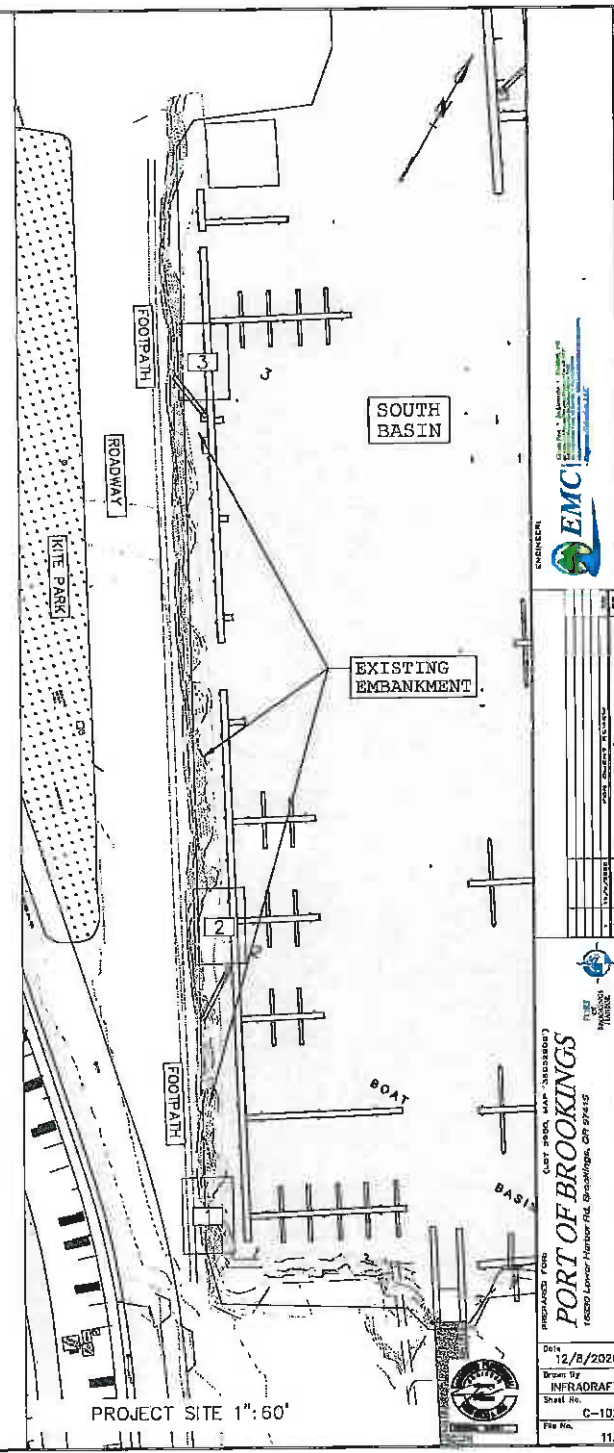
PORT OF BROOKINGS  
12500 Levee/Harbor-Fish, Brookings, OR 97415



Date: 12/8/2020  
Drawn By: INFRADRAFT  
Sheet No.: C-100  
File No.: 113

308





EXISTING CONDITIONS  
SCALE 1"=100'

PROJECT SITE 1"=50'



NO.	DATE	DESCRIPTION
1		ISSUED FOR PERMITTING
2		ISSUED FOR PERMITTING
3		ISSUED FOR PERMITTING
4		ISSUED FOR PERMITTING
5		ISSUED FOR PERMITTING
6		ISSUED FOR PERMITTING
7		ISSUED FOR PERMITTING
8		ISSUED FOR PERMITTING
9		ISSUED FOR PERMITTING
10		ISSUED FOR PERMITTING



PREPARED FOR: GUST PERRY, GARY, OREGON 97137  
**PORT OF BROOKINGS**  
 1000 Lower Harbor Rd., Brookings, OR 97515

Date: 12/8/2020  
 Drawn by: INFRADRAFT  
 Sheet No.: C-102  
 File No.: 113

210



EXISTING EMPANKMENT VIEWS

113



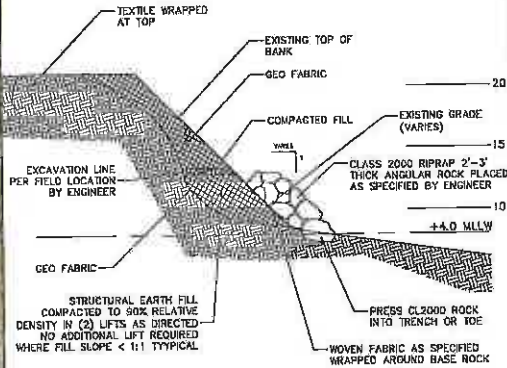
DATE	01/06/2021
BY	INFRA DRAFT
NO.	C-102A
PROJECT	PORT OF BROOKINGS
CLIENT	PORT OF BROOKINGS
SCALE	AS SHOWN

PROPOSED PORT OF BROOKINGS  
 10000 Harbor Rd, Brookings, OR 97513

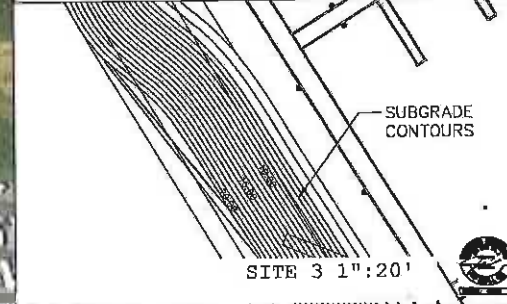
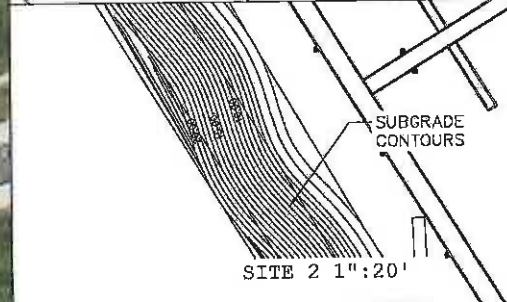
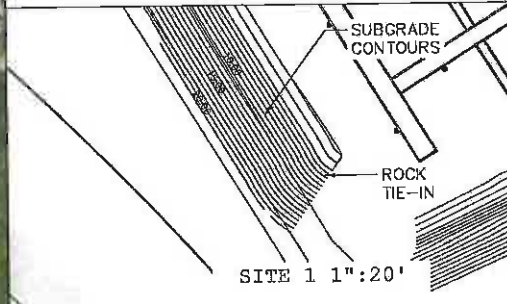


Date: 01/06/2021  
 Drawn By: INFRA DRAFT  
 Sheet No.: C-102A  
 File No.:

**EMBANKMENT CONSTRUCTION**  
 Place fabric on the entire embankment. Place riprap similar to TYPICAL SECTION. Start with larger boulders (3' x 4' x 4') into the 5' cut made in the toe. Place another layer of rock atop that rock. Place a combination of smaller rocks, anywhere from 3' diameter to 1' diameter, above the toe, up to 12' above the bottom of the toe. The wall should be 5' thick at the bottom, up to 2' thick at the top.



TYPICAL EMBANKMENT CROSS-SECTION



ROCK TIE-IN

NEW SUBGRADE CONTOURS

BOAT

BASIN

ROCK TIE-IN

BOAT BASIN

NEW EMBANKMENT DESIGN  
 SCALE 1"=80'

EMC

PORT OF BROOKINGS

16500 former Harbor Pier, Brookings, SD 57005

Date: 12/8/2020  
 Drawn by: INFRADRAFT  
 Sheet No: C-103  
 File No: 115

312



**Design Specifics of Rock & Construction**

The rock used (if 406 Mitigation is approved) for this project will be specified to follow test requirements found within AASHTO 85 (Apparent specific gravity, percent absorption); ODOT TM 208A (degradation); and AASHTO T 104 (soundness). All rock specified in this project must be angular in shape, and the thickness of any single rock shall not be less than one-third of its length. Round rock will not be accepted unless authorized by EMC. The rock must meet the gradation requirements for the class specified, be free from overburden, spalled, shale and organic material. Non-durable rock, shale or rock with shale seams is not acceptable. Class 2000 rip rap is by definition comprised of rocks that are 20% by weight of 1400 pounds to 2000 pounds, 30% by weight of 700 to 1400 pounds, 40% by weight 40 to 700 pounds and 0 to 10% 0 to 40 pounds. Either a filter blanket of 16 inch layer of class 50, or specified filter fabric will be laid beneath the rock.

A clamshell, orange peel bucket, skip or similar approved device will be used which will transport the riprap material to its final destination. This revetment repair is for flow assumed to generally be uniform, steady and subcritical. However, rapidly varying, unsteady flow conditions occur occasionally, and excessive wave action, hydraulic jumps and extreme flow turbulence can occur at this location. These conditions are among the reasons for the extent of protection proposed. The longitudinal extent of this repair should be continuous for a distance greater than the length that is impacted. The vertical extent of protection required for this revetment includes design height and foundation or toe depth. The design height of the rip rap installation is to be equal to the design high water elevation (King tide plus storm surge) with adequate freeboard to accommodate wave action, super elevation from the channel bend, hydraulic jump, and flow irregularities, plus erratic phenomena such as unforeseen embankment settlement, accumulation of trash and debris from the river.

Scour depth is estimated at about 4 feet from the lowest elevation in the cross-section of the basin at this point, utilizing the conservative assumption of a median diameter of bed material to be about 0.15 m. Riprap thickness for Class 2000 is specified to be at least a 4 foot layer.

The filter beneath the riprap and overlying the structural fill is to prevent the migration of fine soil particles through structural voids and to distribute the weight of the armor units (riprap) to provide more uniform settlement, and also permits relief of hydrostatic pressures within the soils.

For the areas above the waterline at any given time the fabric or geotextile also prevents surface water from causing erosion beneath the rip rap. In addition to toe considerations with respect to scour the flanks of this revetment are designed for upstream and downstream conditions

**General Construction, Erosion & Control Notes**

Final bank slope will be between 1V:1.5H and 1V:2H. Bank preparation will consist of clearing debris and minor grading. Riprap placement will be by machine placing and hand placing. Hand placing will be performed as specified by EMC on steeper side slopes. Re-handling or dragging to smooth revetment services tend to result in segregation and breakage of stone and are to be avoided. Stone will not be dropped from an excessive height.

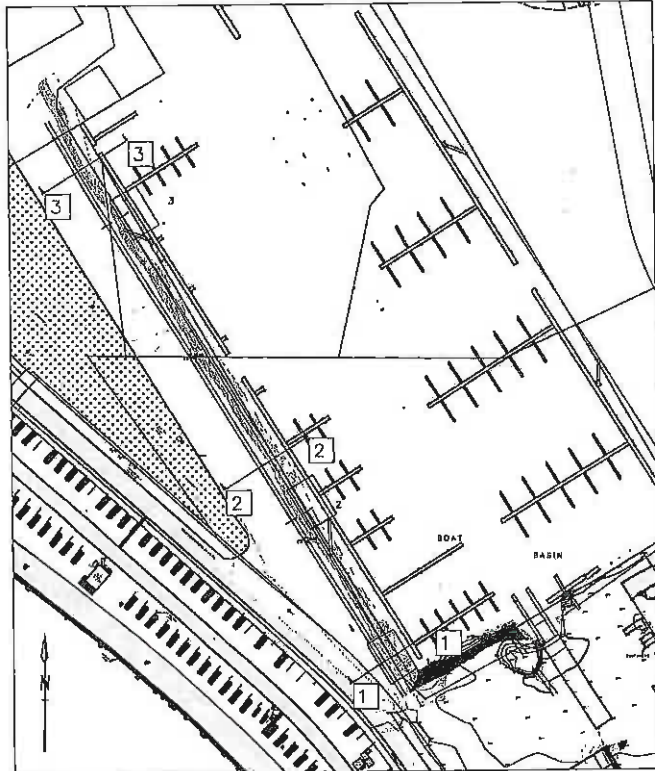
Actions that will require the use of materials that are hazardous or toxic to aquatic life (such as motor fuel, oil, or drilling fluid), are included within the pollution and erosion control plan sections of this narrative, to be managed by EMC and enforced by the Port of Brookings-Harbor. The plan includes practices to minimize erosion and sedimentation associated with all aspects of the project (e.g., staging areas, stockpiles, grading); to prevent debris from dropping or otherwise entering any stream or waterbody; and to prevent and control hazardous material spills.

Erosion controls will be monitored and maintained daily during the rainy season and weekly during the dry season as necessary to ensure controls are properly functioning. If monitoring shows that the erosion controls are ineffective at preventing visible sediment discharge, the project will stop to evaluate erosion control measures. Repairs, replacements or the installation of additional erosion control measures will be completed before the project resumes.

If applicable, maintenance will include removal of sediment and debris from erosion controls like silt fences or hay bales once it has reached one-third of the exposed height of the control. Whenever practical, native materials are to be left where they are found and in areas to be cleared, vegetation is to be clipped at ground level to retain root mass and encourage reestablishment of native vegetation.

Heavy equipment will be selected and operated as necessary to minimize adverse effects on the environment (e.g., minimally-sized, low pressure tires, minimal hard turn paths for tracked vehicles, temporary mats or plates within wet areas or sensitive soils); and all vehicles and other heavy equipment will be used as follows:

- 1) Stored, fueled and maintained in a vehicle staging area placed 150 feet or more from any waterbody, or in an isolated hard zone such as a paved parking lot, or lined surface;
- 2) Inspected daily for fluid leaks before leaving the vehicle staging area for operation within 50 feet of any waterbody;
- 3) Steam-cleaned before operation below ordinary high water, and as often as necessary during operation to remain free of all external oil, grease, mud, seeds, organisms and other visible contaminants and
- 4) Generators, cranes and any other stationary equipment operated within 150 feet of any waterbody will be maintained and protected as necessary to prevent leaks and spills from entering the water.



SITES 1, 2, 3 SECTION LINES

**Nonwoven Geotextile**

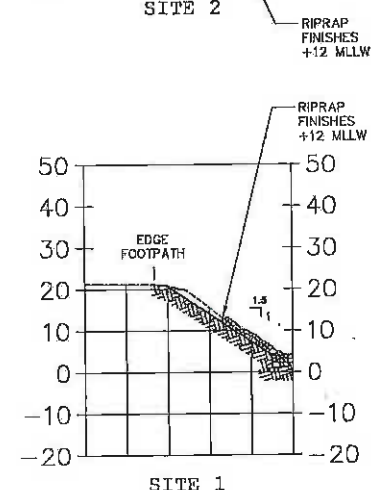
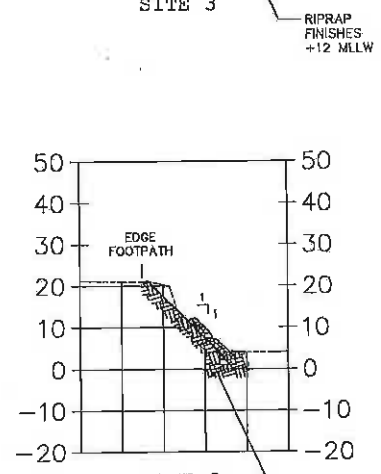
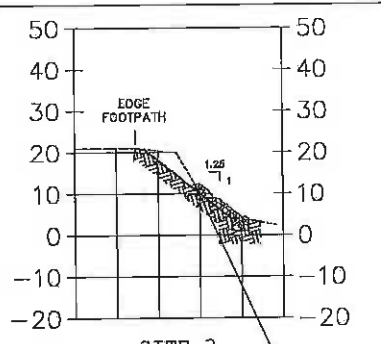
NOTE APPROVED - GTS 2013-01-019. US 2000NW is a nonwoven needlepunched geotextile made of 100% polypropylene staple filaments. US 2000NW resists ultraviolet and biological deterioration, rotting, naturally encountered bacteria and acids. Polypropylene is stable within a pH range of 2 to 12. US 2000NW meets the following M.A.R.V. values except where noted:



PROPERTY	TEST METHOD	ENGLISH	METRIC
Weight - Typical	ASTM D-5261	12 oz/sq yd	407 gsm
Tensile Strength	ASTM D-4632	300 lbs	1,333 N
Elongation @ Break	ASTM D-4632	30%	50%
Matule (lb/ft²)	ASTM D-3786*	550 psi	3,799 kPa
Puncture Strength*	ASTM D-4633*	150 lbs	668 N
CHR Puncture	ASTM D-6241	850 lbs	3,782 N
Triaxial Tear	ASTM D-4533	115 lbs	511 N
Apparent Opening Size	ASTM D-4751	100 US Sieve (1.50 mm)	
Permeability	ASTM D-4491	1.10 Sec-1	1.89 Sec-1
Water Flow Rate	ASTM D-4491	28 g/min/ft²	3,685 l/min/m²
UV Resistance @ 500 Hours	ASTM D-4355	70%	70%

VOLUME REPORT	
(APPROXIMATE)	
GEOTEXTILE FABRIC	4498 SQ YD
CLASS 2000 RIP RAP	2462.34 CU YD
CUT	1792 CU YD
FILL	966 CU YD

ROLL SIZE	ROLL DIAMETER	AREA	WEIGHT
12' x 36'	24.0 ft	504 sq ft	385 lbs
15' x 30'	22.5 ft	504 sq ft	385 lbs



CROSS-SECTIONS NTS

**EMC**

Erosion Management Corporation  
1000 S. Harbor Blvd., Brookings, OR 97515  
Tel: 541-338-2222 Fax: 541-338-2223

---

**PORT OF BROOKINGS**

1000 S. Harbor Blvd., Brookings, OR 97515  
Tel: 541-338-2222 Fax: 541-338-2223

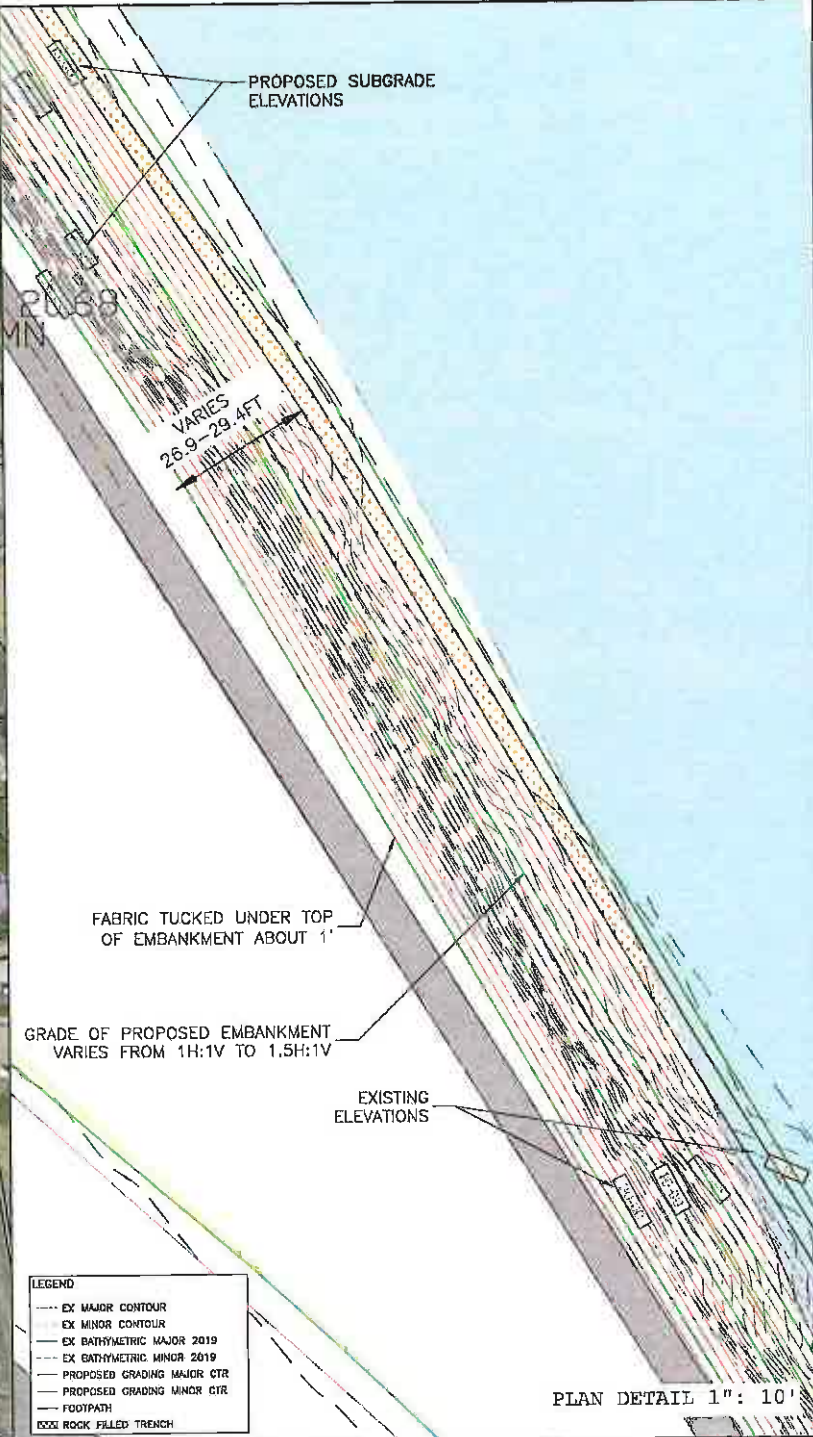
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DATE: 12/8/2020  
DRAWN BY: INFRADRAFT  
SHEET NO.: C-104  
FILE NO.: 113

313



NEW AND EXISTING CONTOURS  
SCALE 1" : 80'



- LEGEND
- EX MAJOR CONTOUR
  - EX MINOR CONTOUR
  - EX BATHYMETRIC MAJOR 2019
  - EX BATHYMETRIC MINOR 2019
  - PROPOSED GRADING MAJOR CTR
  - PROPOSED GRADING MINOR CTR
  - FOOTPATH
  - XXXX ROCK FILLED TRENCH

PROPOSED SUBGRADE ELEVATIONS

20.68

VARIES  
26.9 - 29.4 FT

FABRIC TUCKED UNDER TOP OF EMBANKMENT ABOUT 1'

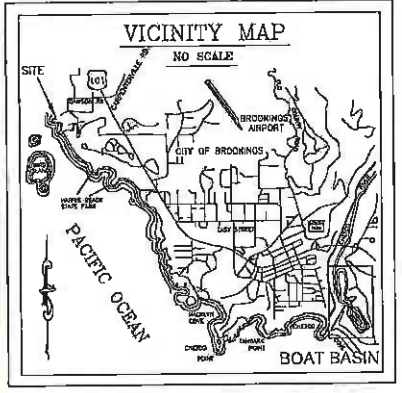
GRADE OF PROPOSED EMBANKMENT VARIES FROM 1H:1V TO 1.5H:1V

EXISTING ELEVATIONS

PLAN DETAIL 1" : 10'

  
 ENGINEER

 <b>PORT OF BROOKINGS</b> <small>18250 Lower Highway Rd., Brookings, OR 97516</small>	 <small>North Arrow</small>
<small>PREPARED FOR</small> DATE: 12/27/2020 <small>Drawn By</small> INFRADRAFT <small>Sheet No.</small> C105 <small>File No.</small> 113	<small>DATE</small> 12/27/2020 <small>BY</small> INFRADRAFT <small>CHECKED</small>  <small>SCALE</small> 1" = 10' <small>DATE</small> 12/27/2020 <small>BY</small> INFRADRAFT <small>CHECKED</small>  <small>SCALE</small> 1" = 80' <small>DATE</small> 12/27/2020 <small>BY</small> INFRADRAFT <small>CHECKED</small>



**SHEET INDEX**

- C0.0 COVER SHEET
- C1.0 EXISTING CONDITIONS
- C2.0 OPTION 4 ROCK WALL

REVISIONS	BY:

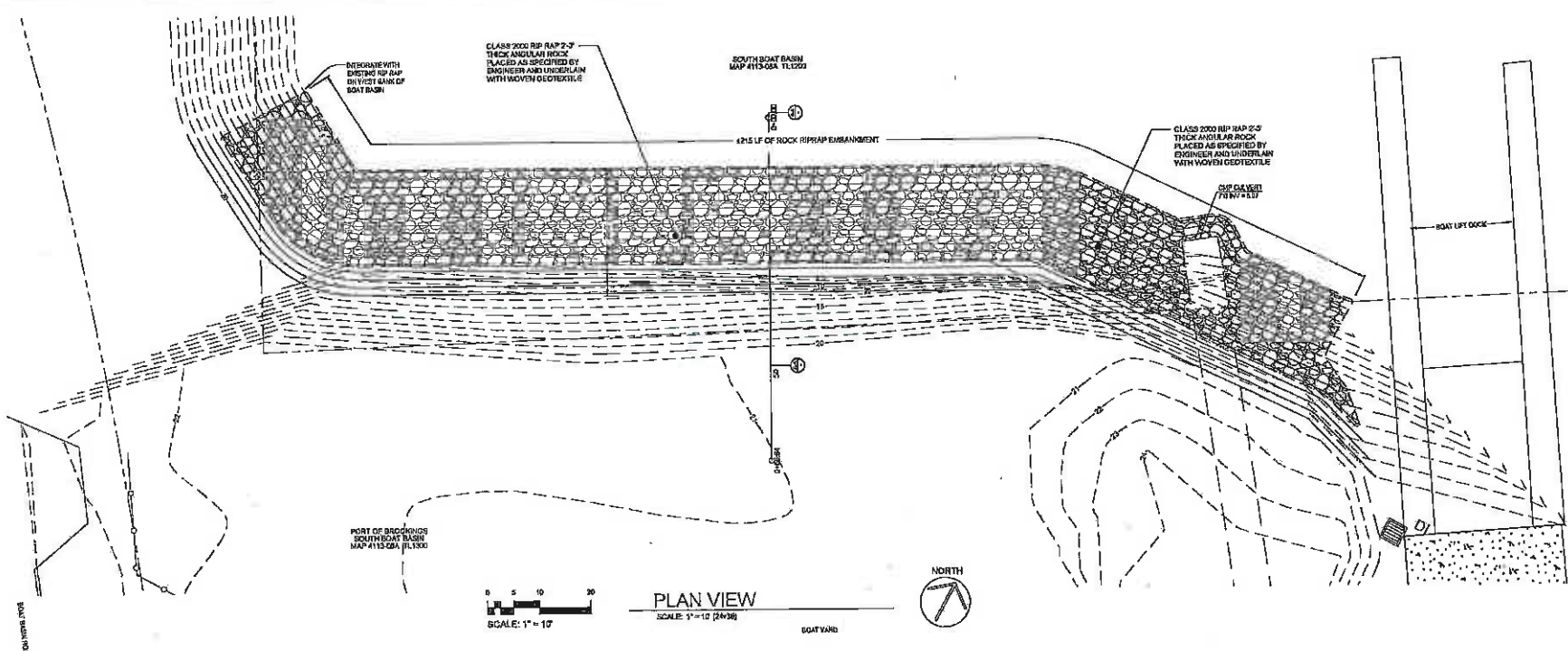
Grant, Pae • Jackson, W. • Moffatt, O.R.  
 Civil Engineers • 2000 Highway 101, Brookings, OR 97415  
 Phone: 541-338-4444 • Fax: 541-338-4445  
[www.emc-engineers.com](http://www.emc-engineers.com)  
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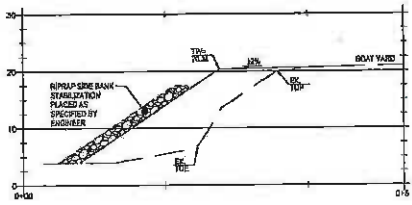
**PORT OF BROOKINGS HARBOR**  
 16300 LOWER HARBOUR ROAD, BROOKINGS, OR 97415  
**SOUTH BOAT BASIN WALL**

DRAWN BY: JG  
 DATE: 16 APR 2021  
 JOB No: 6  
 SHEET No:  
**C0.0**  
 COVER SHEET

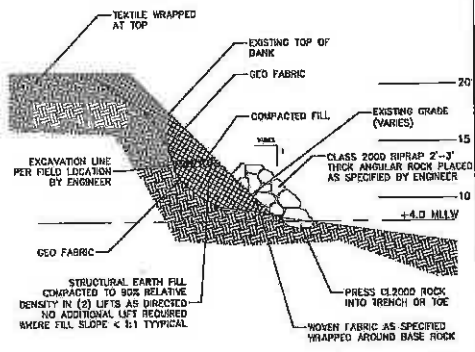




**PLAN VIEW**  
SCALE: 1" = 10' (2438)



**ROCK EMBANKMENT - SECTION A - A**  
SCALE: 1" = 10' (3048)



**TYPICAL EMBANKMENT CROSS SECTION**  
NOT TO SCALE

PLACE FABRIC ON THE ENTIRE EMBANKMENT. PLACE RIPRAP SHEETS TO TYPICAL SECTION. START WITH LARGER BOULDER 12" X 18" INTO THE 6" CUT MADE IN THE TRENCH. PLACE ANOTHER LAYER OF ROCK ATOP THAT ROCK. PLACE A COMBINATION OF SMALLER ROCKS ANYWHERE FROM 6" DIAMETER TO 1' DIAMETER. ABOVE THE TRENCH UP TO 12" ABOVE THE BOTTOM OF THE TRENCH. THE WALL SHOULD BE 3' THICK AT THE BOTTOM, UP TO 2' THICK AT THE TOP.

**EMBANKMENT CONSTRUCTION NOTES**

**PROPOSED ROCK EMBANKMENT - OPTION 4**  
SCALE: 1" = 10' (3048)

REV.	DESCRIPTION

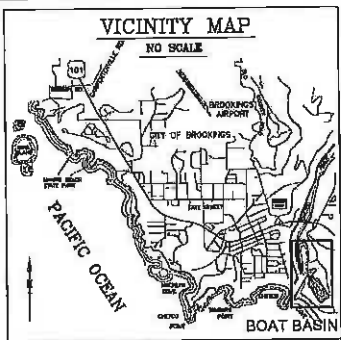
Grant Pass • Jacksonville • Mifland, OH  
 614-233-8888 • Fax 614-233-8888  
 www.emc-engineers.com

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 Engineers/Scientists, LLC



**PORT OF BROOKINGS HARBOR**  
 10330 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
**SOUTH BOAT BASIN WALL**

DRAWN BY: JG  
 DATE: 18 APR 2021  
 JOB No: #  
 SHEET No:  
**C2.0**  
 OPTION 4  
 ROCK WALL



PORT  
OF  
BROOKINGS  
HARBOR



PORT OF BROOKINGS-HARBOR  
2021 CIVIL IMPROVEMENTS

PROPOSED ROAD

NATURAL FEATURES

EXISTING NATURAL RESOURCES OR NATURAL HAZARDS ON THE SUBJECT PROPERTY, INCLUDING WETLANDS, STREAMS, RIPARIAN AREAS, FLOOD PLAINS, OR FLOODWAYS TO BE DETERMINED BY ENGINEER

EXISTING TREE CANOPY

THERE ARE NO EXISTING TREES ON THE SUBJECT PROPERTY

CULTURAL RESOURCES

LOCALLY, OR FEDERALLY DESIGNATED HISTORIC AND/OR CULTURAL RESOURCES ON THE SITE OR ON ADJACENT PARCELS TO BE DETERMINED BY ENGINEER.

PUBLIC SERVICES

PUBLIC UTILITY SERVICES, INCLUDING WATER, SEWER, STORM DRAINAGE, POWER, TELEPHONE, CABLE INTERNET, AND GAS ARE AVAILABLE TO THE SUBJECT PROPERTY.

UTILITY STATEMENT

EXISTING UNDERGROUND UTILITIES ILLUSTRATED IN THESE PLANS ARE APPROXIMATED BASED ON MAPS OBTAINED FROM CURRY COUNTY GIS ELEVATIONS ESTIMATES, OR HAVE BEEN LOCATED BY A UTILITY LOCATE COMPANY. LAYOUT INDICATED IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. ALL LINES WITHIN PROJECTED WORK ZONE SHALL BE FIELD VERIFIED AS REQUIRED PRIOR TO CONSTRUCTION.

PROJECT DESCRIPTION

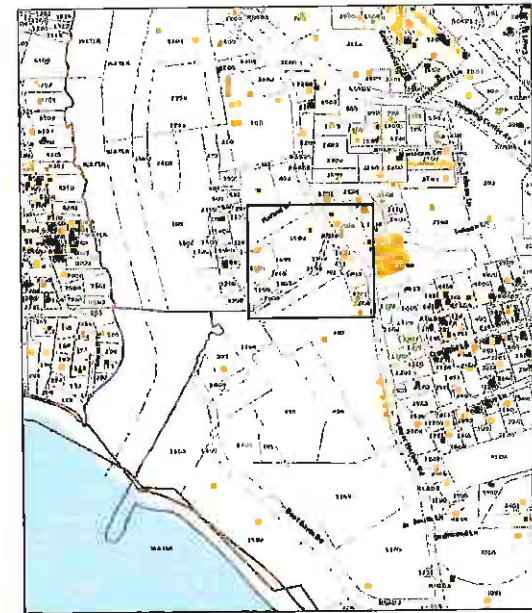
TITLE: PROPOSED ROAD  
REFERENCE: 140  
LOCATION: HARBOR ST  
TAX LOT(S): 2500, 2600, 2700, 2800  
2900, 2999, 402

DRAWING REGISTER

140-CV COVER SHEET  
140-C100 NOTES  
140-C101 EXISTING CONDITIONS  
140-C102 PROPOSED GRADING  
140-C103 PROPOSED PAVING  
140-C104 PROPOSED DRAINAGE  
140-C105 DETAILS  
140-C106 916 DETAILS



PROJECT OVERVIEW  
SCALE 1" : 200'



PORT OF BROOKINGS HARBOR  
MAP OF TAX LOTS

PRELIM GRADING NOTES

1. DEQ 1200-C PERMIT IS REQUIRED.
2. UNLESS DIRECTED OTHERWISE, REMOVE CLEARED AND GRUBBED MATERIAL FROM THE SITE AND DISPOSE AT AN APPROVED LOCATION.
3. PRIOR TO THE START OF CONSTRUCTION, VERIFY GRADES AT SAWCUT LOCATIONS AND MATCHING OF EXISTING GRADE LOCATIONS.
4. MINIMIZE TRAFFIC ON SOIL AREAS DURING WET WEATHER. IF THE SITE SOILS ARE EXPOSED DURING WET WEATHER, THE USE OF CRUSHED ROCK PLACED AS ENGINEERED FILL IN THE BOTTOM OF THE EXCAVATIONS MAY BE NECESSARY TO PROTECT THE SUBGRADE. TAKE ALL PRECAUTIONS TO LIMIT SURFACE DISTURBANCE AND PROTECT THE SITE GRADING AREA FROM EROSION AND RUNOFF.
5. UNLESS OTHERWISE NOTED, THE SAMPLING AND TESTING OF MATERIALS FOR USE ON THE JOBSITE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. ALL TESTING OF MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY A CERTIFIED TESTER. RESULTS OF THE TESTS SHALL BE SENT DIRECTLY TO THE PROJECT ENGINEER AS WELL AS THE CONTRACTOR, BY THE LABORATORY. LOCATION AND FREQUENCY OF TESTS SHALL BE DESIGNATED BY THE GENERAL CONTRACTOR.
6. ALL CUT AND FILL SLOPES SHALL BE MAXIMUM OF 2:1.

LEGEND

5	ELEVATION
---	SUBGRADE MINOR CONTOUR
---	SUBGRADE MAJOR CONTOUR
---	PARCEL
---	GEOTEKSTILE
■	CONCRETE PAD
■	GRASS
■	JETTY
■	SLIP WAY
■	PAVED ROAD



ENGINEER



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www.emci-engineering.com

PREPARED FOR: (LOT 2900, MAP 30082200)

PORT OF BROOKINGS  
16330 Lower Harbor Rd, Brookings, OR 97415

Date	04/04/2021
Drawn By	INFRA DRAFT
Sheet No.	CV
File No.	140

**GRADING NOTES**

1. PRIOR TO THE CONSTRUCTION OF EMBANKMENTS, THE CONTRACTOR SHALL EXCAVATE UNSUITABLE FOUNDATION MATERIAL. BASEMENTS, TRENCHES AND HOLES ENCOUNTERED WITHIN EMBANKMENT LIMITS SHALL BE FILLED WITH APPROVED MATERIAL. PRIOR TO BACKFILLING THE CONTRACTOR SHALL BREAK CONCRETE FLOORS OF BASEMENTS AS DIRECTED. THE CONTRACTOR SHALL BREAK UP AND ROUGHEN THE GROUND SURFACE BEFORE EMBANKMENTS MATERIAL IS PLACED THE NATURAL GROUND UNDERLYING EMBANKMENTS SHALL BE COMPACTED TO THE DENSITY SPECIFIED FOR THE EMBANKMENT MATERIALS TO BE PLACED, AND TO THE DEPTH OF THE GRUBBING OR A MINIMUM OF 6 INCHES.
2. EMBANKMENT CONSTRUCTION SHALL INCLUDE PREPARATION OF THE AREAS UPON WHICH EMBANKMENTS ARE PLACED, THE PLACEMENT AND COMPACTION OF APPROVED EMBANKMENT MATERIALS AND FILLING OF HOLES, PITS AND OTHER DEPRESSIONS WITHIN THE SUBDIVISION.
3. THE CONTRACTOR SHALL PLACE EMBANKMENTS AND FILLS IN THE HORIZONTAL LAYERS OF 8 INCHES MAXIMUM DEPTH AND COMPACT EACH LAYER TO THE DENSITY SPECIFIED.
4. EMBANKMENT SHALL NOT BE CONSTRUCTED WHEN THE EMBANKMENT MATERIAL OR THE FOUNDATION ON WHICH THE EMBANKMENT WOULD BE PLACED IS FROZEN.
5. IMMEDIATELY PRIOR TO COMPLETION OF THE EARTHWORK, THE CONTRACTOR SHALL CLEAN THE ENTIRE WORK AREA OF DEBRIS AND FOREIGN MATTER.
6. THE MAXIMUM DENSITY OF COMPACTED MATERIAL WILL BE DETERMINED BY AASHTO T-99
7. THE CONTRACTOR SHALL COMPACT ALL EMBANKMENTS, FILLS AND BACKFILLS TO A MINIMUM IN PLACE DENSITY OF 95 PRESENT.
8. THE CONTRACTOR SHALL WATER THE MATERIALS TO PROVIDE OPTIMUM MOISTURE FOR COMPACTION OF EMBANKMENT AND BACKFILLS. EMBANKMENTS OD BACKFILL MATERIALS SHALL NOT BE PLACED IN FINAL POSITION UNTIL MOISTURE IN EXCESS OF OPTIMUM MOISTURE HAS BEEN REMOVED.
9. IF THE SPECIFIED COMPACTION IS NOT OBTAINED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER. THE CONTRACTOR MAY BE REQUIRED TO USE A MODIFIED COMPACTION PROCEDURE OR APPLY ADDITIONAL COMPACTIVE EFFORT. IF APPROVED MATERIALS MEETING THE SPECIFICATIONS CANNOT BE COMPACTED TO THE REQUIRED DENSITY REGARDLESS OF COMPACTIVE EFFORT OR METHOD, THE ENGINEER MAY REDUCE THE REQUIRED DENSITY OR DIRECT THE ALTERNATE MATERIALS BE USED. IN NO CASE SHALL EARTHWORK OPERATIONS PROCEED UNTIL THE CONTRACTOR IS ABLE TO COMPACT THE MATERIAL TO THE SATISFACTION OF THE ENGINEER.
10. DEQ 1200-C PERMIT IS NOT REQUIRED.
11. UNLESS DIRECTED OTHERWISE, REMOVE CLEARED AND GRUBBED MATERIAL FROM THE SITE AND DISPOSE AT AN APPROVED LOCATION.
12. UNLESS OTHERWISE NOTED, THE SAMPLING AND TESTING OF MATERIALS FOR USE ON THE JOBSITE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. ALL TESTING OF MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY A CERTIFIED TESTER. RESULTS OF THE TESTS SHALL BE SENT DIRECTLY TO THE PROJECT ENGINEER AS WELL AS THE CONTRACTOR, BY THE LABORATORY. LOCATION AND FREQUENCY OF TESTS SHALL BE DESIGNATED BY THE GENERAL CONTRACTOR.
13. ALL CUT AND FILL SLOPES SHALL BE MAXIMUM OF 2:1.

**GEOTECHNICAL NOTE**

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE PROJECT ENGINEER FOR REQUIRED REMEDIATION. THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT ENGINEER FOR REQUIRED SITE OBSERVATIONS AND TESTING OF ALL FILLS.

GENERAL NOTES  
NO SCALE

319



ENGINEER

NO.	DATE	REVISION	BY

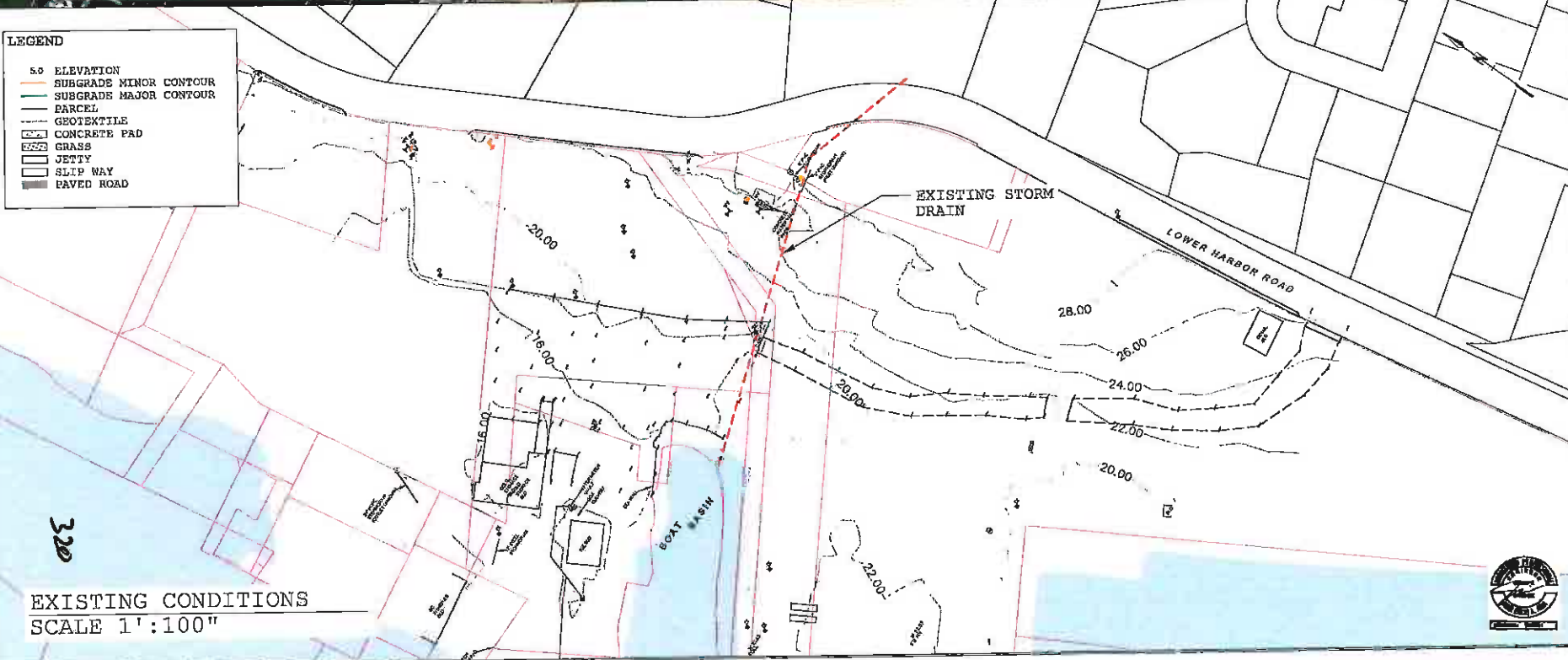


PREPARED FOR: (LOT 2800, MAP '26032208')  
**PORT OF BROOKINGS**  
16390 Lower Harbor Rd., Brookings, OR 97415

Date	04/04/2021
Drawn By	INFRA DRAFT
Sheet No.	C-100
File No.	140



- LEGEND**
- 5.0 ELEVATION
  - SUBGRADE MINOR CONTOUR
  - SUBGRADE MAJOR CONTOUR
  - PARCEL
  - GEOTEKILE
  - CONCRETE PAD
  - GRASS
  - JETTY
  - SLIP WAY
  - PAVED ROAD



EXISTING CONDITIONS  
SCALE 1":100"

ENGINEER  
**EMC!**  
Civil, Mechanical, Electrical, Surveying, Environmental, and Construction  
10000 SW 10th St., Suite 100  
Portland, Oregon 97219  
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Fax: 503.253.1112  
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PREPARED FOR: (LOT 2800, MAP 'S053220B')  
**PORT OF BROOKINGS**  
16530 Lower Harbor Rd, Brookings, OR 97415

Date 04/04/2021  
Drawn By INFRA DRAFT  
Sheet No. C-101  
File No. 140



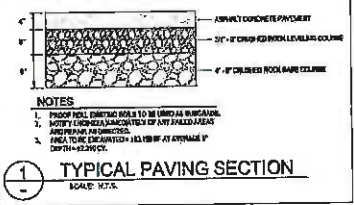




- LEGEND**
- 5.0 ELEVATION
  - SUBGRADE MINOR CONTOUR
  - SUBGRADE MAJOR CONTOUR
  - PARCEL
  - GEOTEKSTILE
  - CONCRETE PAD
  - GRASS
  - JETTY
  - SLIP WAY
  - PAVED ROAD

EXCAVATE SUBGRADE TO  
±1.5' BELOW TOP OF CONC  
AND TOP OF BANK ELEVATION

PROPOSED SEDIMENT  
STOCKPILE AREA



EXCAVATE SUBGRADE TO  
1.5' BELOW EXISTING ROAD

EXCAVATE SUBGRADE TO  
±1.5' BELOW TOP OF CONC  
AND TOP OF BANK ELEVATION

EXCAVATE SUBGRADE TO  
±1.5' BELOW TOP OF CONC  
AND TOP OF BANK ELEVATION

**GRADING PLAN**  
SCALE 1' : 100"

321

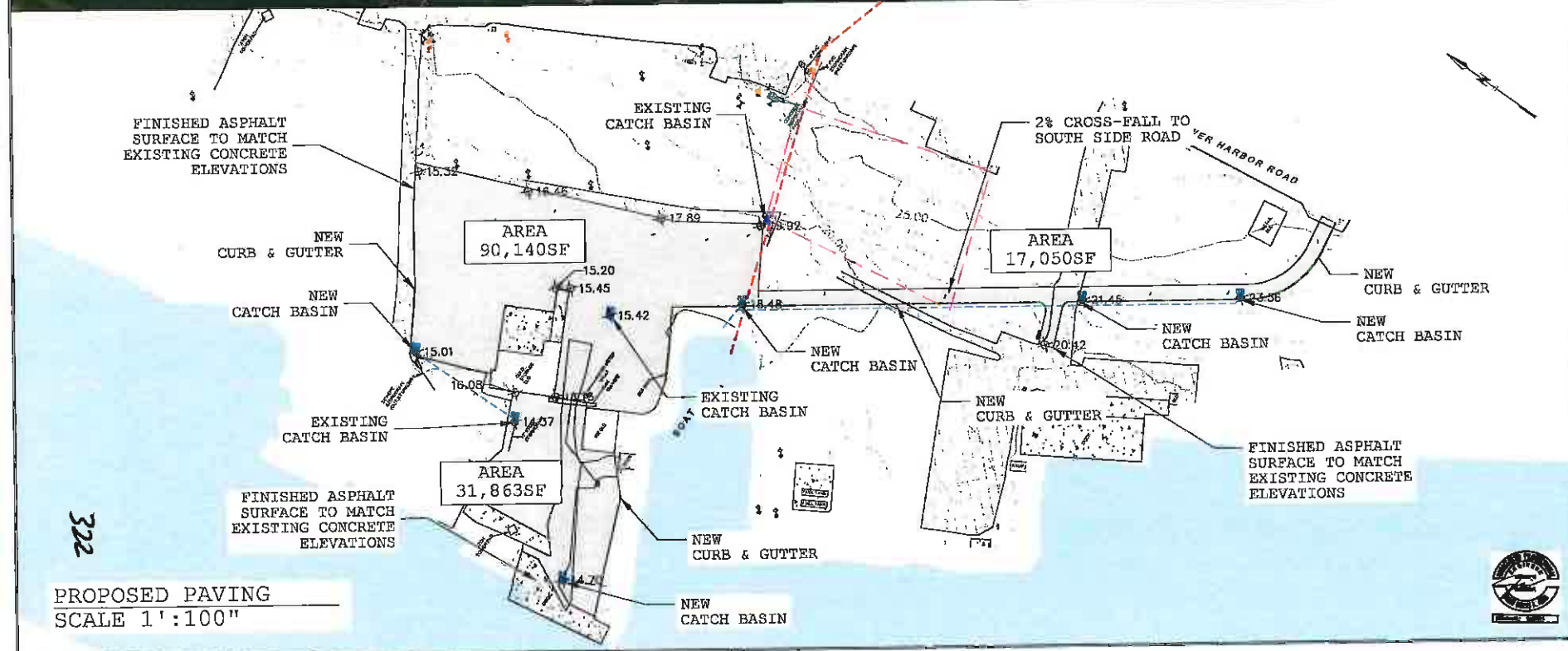


ENGINEER:  
**EMC!**  
Civil, Mechanical, Electrical, and Surveying Engineers  
1000 NE Oregon Street, Suite 200  
Astoria, Oregon 97103  
Phone: 503.325.1111  
Fax: 503.325.1112  
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PREPARED FOR:  
**PORT OF BROOKINGS**  
18330 Lower Harbor Rd, Brookings, OR 97415

Date  
04/04/2021  
Drawn By  
INFRADRAFT  
Sheet No.  
C-102  
File No.  
140



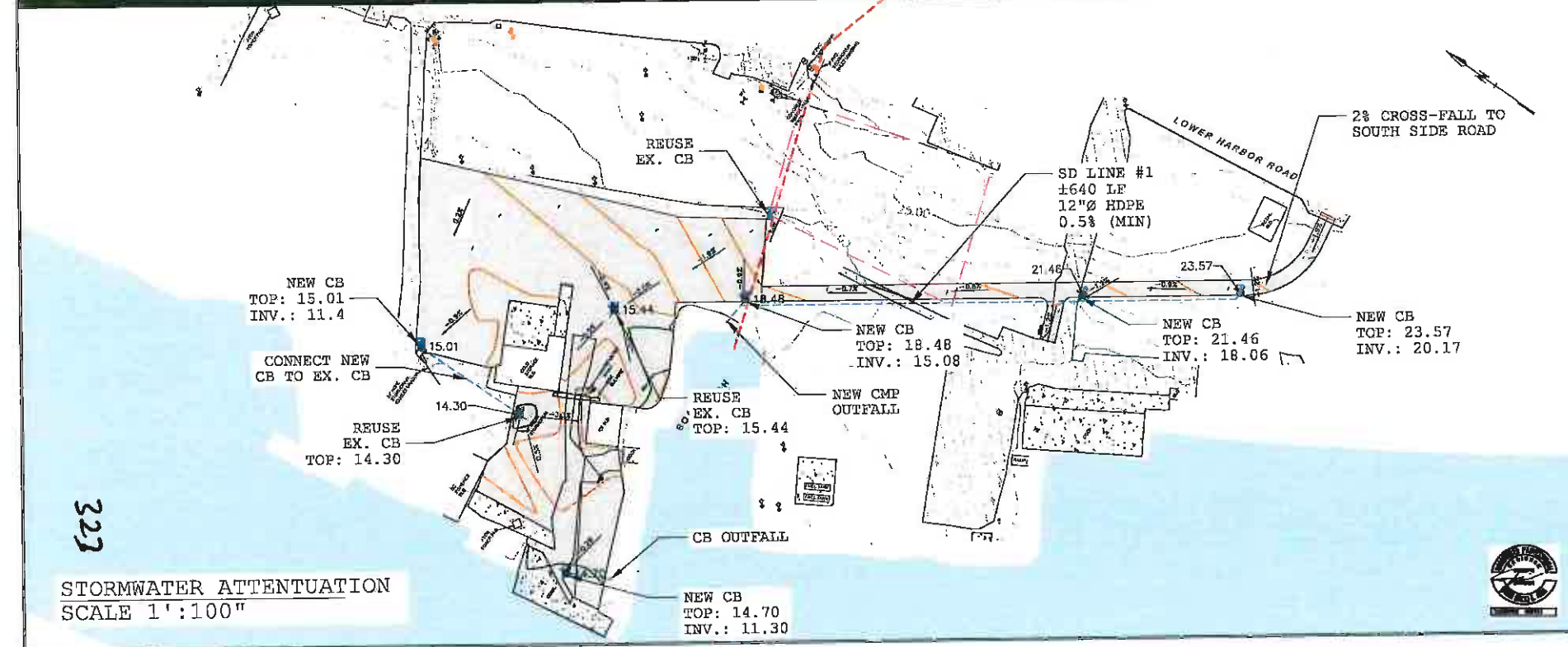
PROPOSED PAVING  
SCALE 1':100"

322

NO.	DATE	REVISION	BY



PREPARED FOR: (LOT 2800, MAP '9803220B')  
**PORT OF BROOKINGS**  
18390 Lower Harbor Rd., Brookings, OR 97415



322

STORMWATER ATTENUATION  
SCALE 1':100"

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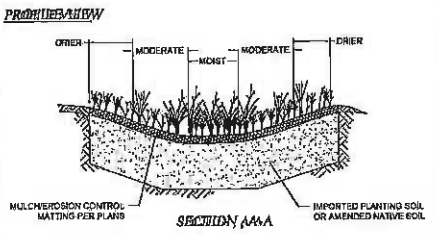
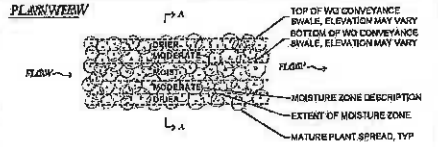
NO.	DATE	REVISION	BY



PREPARED FOR: (LOT 2900, MAP 36052209)  
**PORT OF BROOKINGS**  
16930 Lower Harbor Rd, Brookings, OR 97415

Date: 04/04/2021  
Drawn By: INFRADRAFT  
Sheet No. C-104  
File No. 140





**LEGEND:**

- INDICATES GRADE BREAK
- MOISTURE ZONE
- PLANT SPECIES APPROPRIATE FOR MOISTURE ZONE
- DRIER
- MODERATE
- MOIST

**NOTES:**

- THIS DETAIL IS PROVIDED AS A SCHEMATIC EXAMPLE OF THE RANDOM PLANT PLACEMENT AND ROW COVERAGE AFTER ESTABLISHMENT PERIOD DESIRED TO REDUCE EROSION AND WEEDS.
- INSTALL PLANTS PER PLANS, ACCORDING TO LANDSCAPE DESIGN PLANT TABLE, WHICH SHOULD INCLUDE PLANT SPECIES, SPACING, AND QUANTITIES IN EACH MOISTURE ZONE.
- MOISTURE ZONES MAY VARY THOSE SHOWN DEPENDENT ON GRADING PLAN, LOCATION OF INLET(S) AND OUTLET(S) AND FACILITY SHAPE.

Rogue Valley Stormwater Design Manual | Water Quality Conveyance Swale Planting Schematic | BMP 8.03 of 1 Scale: NTS

**General Notes for Vegetated BMPs**

- Existing vegetation of the facility shall, where practicable, be retained to provide for erosion control and stabilization (including any erosion control structures).
- Build and maintain swales as a vegetated swale to reduce stormwater runoff to or from stormwater control facility. Perforated, riprap or geotextile swales shall be installed to reduce erosion, and to provide for infiltration and/or filtration.
- On the remaining swale, it is the responsibility of the contractor to provide for erosion control and stabilization in the form of any other type of vegetative stabilization.
- Overseeding with the same or similar species of annual or perennial seed is not required.
- Placement of mulch shall be as follows:
  - Plant with 1/4" maximum life 10, 20, 30 days.
  - On and placed as follows:
    - Apply to exposed soil in 10, 20, 30 days (if landscape plan) to achieve 80% coverage. Do not compound with heavy mulching or laboratory samples.
    - Apply to exposed soil in 10, 20, 30 days (if landscape plan) to achieve 80% coverage.
    - Apply to exposed soil in 10, 20, 30 days (if landscape plan) to achieve 80% coverage.
- Install 100% type of seed/soil mixture, as specified in approved plans.
- Landscaping plan must address the use of the swales in Table 1 and 2 of section 8.03. Post-planting physical erosion control shall be used. Critical swaling installation shall be the subject of a separate plan for the installation of the vegetated BMP.
- Install mulch, if specified in approved plans. Use other approved weed mats or erosion control matting as specified in approved plans. Apply a minimum 100% type of seed/soil mixture to the vegetated BMP.
- Side slopes outside of four areas must be permanently stabilized with plants and vegetation.

**AMENDED PLANTING SOIL SPECIFICATIONS**

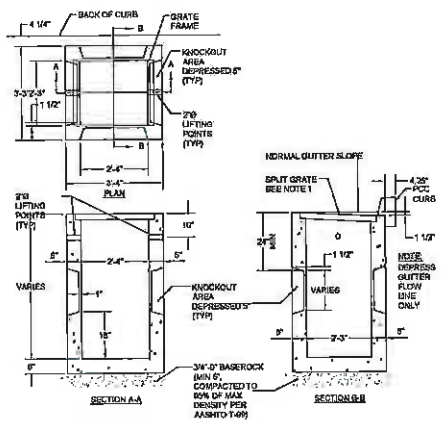
Planting soil may be either amended native soil or imported soil with the following characteristics:

- Infills between 0.5 and 12 inches.
- Free of weed seeds, contaminants, and hazardous materials.
- Organic matter content from 10% to 15% by weight.
- Carbon and nitrogen (C/N) ratio greater than or equal to 5.0 (equivalent to 10% dry wt of soil).
- 50% clayey soil content.
- pH between 5.5 and 7.0.
- Conform to the following gradation for the soil:

US Standard Sieve	Amount Retained
20	10%
40	25%
60	35%
100	45%
200	55%
425	65%
75	75%
150	85%
300	95%
600	98%
1000	99%

**CONSTRUCTION NOTES:**

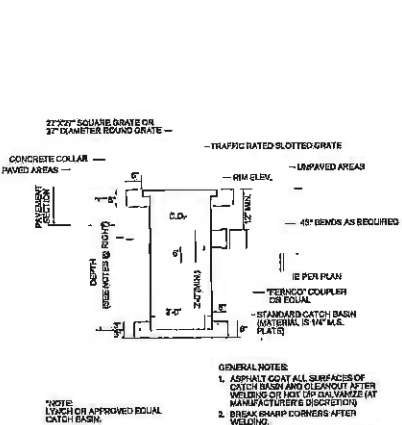
- COVER AND FRAME MAY EACH BE OF CAST IRON OR WELDED STEEL CONSTRUCTION.
- CONCRETE STRENGTH SHALL BE 5000 PSI WITH FIBER MESH.
- CATCH BASIN AND GRATE SHALL MEET HEADLOADING.
- OUTLET PIPE SHALL HAVE A MINIMUM OF 24" OF COVER.



**NOTES:**

- GRATE AND FRAME MAY EACH BE OF CAST IRON OR WELDED STEEL CONSTRUCTION. GRATE AND FRAME TO BE DOT 3-2 TYPE 2 (30 CYCLES LIFE).
- FOR PRECAST BOX, CURB MUST BE BUILT FORMED 12" EACH SIDE OF CATCH BASIN.
- CONCRETE STRENGTH SHALL BE 5000 PSI WITH FIBER MESH.
- CATCH BASIN AND GRATE SHALL MEET HEADLOADING.
- A MINIMUM SLUMP DEPTH OF 12" IS REQUIRED.
- OUTLET PIPE SHALL HAVE A MINIMUM OF 24" OF COVER.

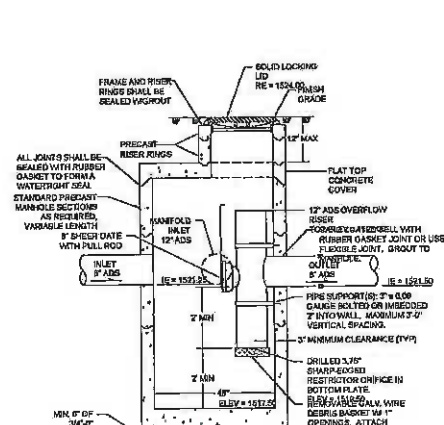
2 CATCH BASIN SCALE: NTS



**GENERAL NOTES:**

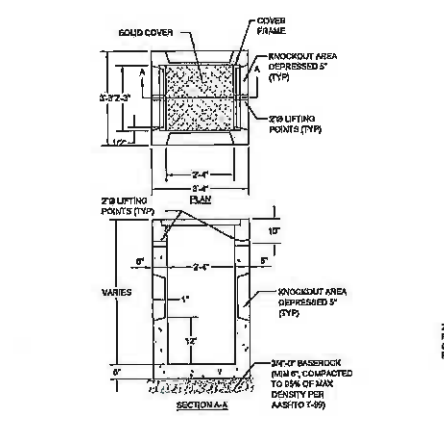
- APPLY COAT ALL SURFACES OF CATCH BASIN AND CLEANOUT AFTER WEAVING OF MAT OR DRILL WARE (BY MANUFACTURER'S DISCRETION).
- BREAK SHARP CORNERS AFTER WEAVING.
- ALL WELDED STEEL CONSTRUCTION.
- TO CHECK STEEL MINIMUM THICKNESS.
- OPENING ON BOTTOM OF WATERSEAL TO BE GREATER OR EQUAL TO AREA IN OUTLET PIPE.
- STANDARD DEPTH: 48"

3 LYNCH STYLE CATCH BASIN SCALE: NTS



**NOTE:** ALL PRECAST SECTIONS SHALL CONFORM TO REQUIREMENTS OF ASTM C 478.

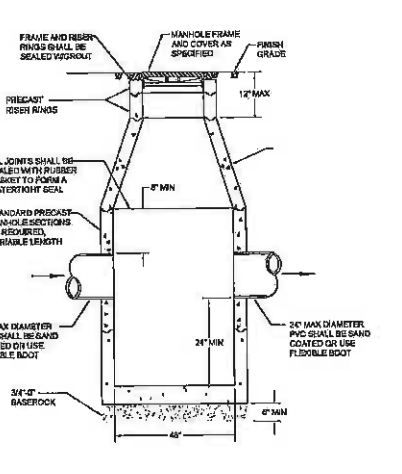
4 CONTROL STRUCTURE MANHOLE SCALE: NTS (PENDING 2 & 3)



**CONSTRUCTION NOTES:**

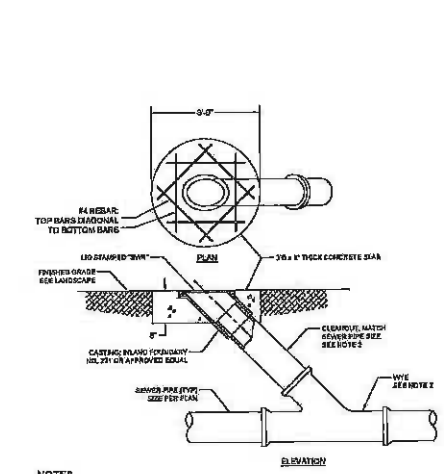
- COVER AND FRAME MAY EACH BE OF CAST IRON OR WELDED STEEL CONSTRUCTION.
- CONCRETE STRENGTH SHALL BE 5000 PSI WITH FIBER MESH.
- CATCH BASIN AND GRATE SHALL MEET HEADLOADING.
- OUTLET PIPE SHALL HAVE A MINIMUM OF 24" OF COVER.

6 JUNCTION BASIN SCALE: NTS



**NOTE:** ALL PRECAST SECTIONS SHALL CONFORM TO REQUIREMENTS OF ASTM C 478.

7 48" STORM MANHOLE SCALE: NTS



**NOTES:**

- CONCRETE TO BE COMMERCIAL GRADE CONCRETE (DOT) PER 2015 DOT STANDARD SPECIFICATIONS SECTION 0240. MINIMUM 5000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
- FITTINGS AND PIPE TO BE BARRETTED PVC 20.

5 TYPICAL CLEANOUT SCALE: NTS

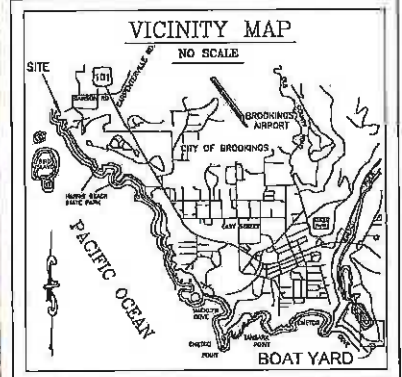
EMC | Environmental Management Company, LLC

PROJECT: PORT COPIER/BERKING/665-BARRISBOR  
 16320 COPPER/BERKING/665-BARRISBOR  
 HILLSBOROUGH, CA 94515  
 2020 IMPROVEMENTS

DRAWN BY: TAM  
 DATE: 09/01/20  
 JOB NO: 20-XXX

**C106**  
PROJECT DETAILS

325



**GRADING NOTES**

1. PRIOR TO THE CONSTRUCTION OF EMBANKMENTS, THE CONTRACTOR SHALL EXCAVATE UNSUITABLE FOUNDATION MATERIAL, BASEMENTS, TRENCHES AND HOLES EMBANKMENT WITHIN EMBANKMENT LIMITS SHALL BE FILLED WITH APPROVED MATERIAL, PRIOR TO BACKFILLING THE CONTRACTOR SHALL BREAK CONCRETE FLOORS OF BASEMENTS AS DIRECTED. THE CONTRACTOR SHALL BREAK UP AND REMOVE THE EXPOSED SURFACE BEFORE EMBANKMENTS MATERIAL, OVER AND ABOVE THE EXPOSED SURFACE EMBANKMENTS SHALL BE COMPACTED TO THE NEAREST SPECIFIED FOR THE EMBANKMENT MATERIALS TO BE PLACED AND TO THE BOTTOM OF THE EXCAVATION OR A MINIMUM OF 6 INCHES.
2. EMBANKMENT CONSTRUCTION SHALL INCLUDE PREPARATION OF THE AREAS UPON WHICH EMBANKMENTS ARE PLACED, THE PLACEMENT AND COMPACTING OF APPROVED EMBANKMENT MATERIALS AND BREAKING OF FILLIES AND OTHER IMPROVEMENTS WITHIN THE SUBGRADE. THE CONTRACTOR SHALL PLACE EMBANKMENTS AND FILL IN THE HORIZONTAL LAYERS OF 9 INCHES MAXIMUM DEPTH AND COMPACT EACH LAYER TO THE DENSITY SPECIFIED.
3. EMBANKMENT SHALL NOT BE CONSTRUCTED WHEN THE EMBANKMENT MATERIAL ON THE FOUNDATION ON WHICH THE EMBANKMENT WOULD BE PLACED IS FROZEN.
4. IMMEDIATELY PRIOR TO COMPLETION OF THE EMBANKING, THE CONTRACTOR SHALL CLEAN THE ENTIRE WORK AREA OF DEBRIS AND FOREIGN MATTER.
5. THE MAXIMUM DENSITY OF COMPACTED MATERIAL SHALL BE DETERMINED BY TESTING FOR THE CONTRACTOR SHALL COMPACT ALL EMBANKMENTS, FILL AND BACKFILLS TO A MINIMUM IN THE VICINITY OF 95 PERCENT.
6. THE CONTRACTOR SHALL WATER THE MATERIALS TO PROVIDE OPTIMUM MOISTURE FOR COMPACTION OF EMBANKMENT AND BACKFILL. EMBANKMENTS OR BACKFILL MATERIALS SHALL NOT BE PLACED IN FINAL POSITION UNTIL MOISTURE IN EXCESS OF OPTIMUM MOISTURE HAS BEEN REMOVED.
7. IF THE SPECIFIED CONSTRUCTION IS NOT OBTAINED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER. THE CONTRACTOR MAY BE REQUIRED TO USE A LIQUID COMPACTION PROCEDURE OR APPLY ADDITIONAL COMPACTION EFFORT IF APPROVED MATERIALS MEETING THE SPECIFICATIONS CANNOT BE OBTAINED TO THE REQUIRED DENSITY IN SPACES OF COMPACTION EFFORT OR METHOD. THE ENGINEER MAY REDUCE THE REQUIRED DENSITY OR SELECT THE ALTERNATE MATERIALS BE USED. IN NO CASE SHALL EXCESSIVE OPERATIONS PROCEED UNTIL THE CONTRACTOR IS ABLE TO COMPACT THE MATERIAL TO THE SATISFACTION OF THE ENGINEER.
8. EACH ROCK PILE SHALL BE WEDGED.
9. UNLESS SPECIFIED OTHERWISE, REMOVE CLEAR AND DRAINAGE.
10. MATERIAL FROM THE SITE AND AROUND AT AN APPROVED LOCATION. UNLESS OTHERWISE NOTED, THE NAME AND METHOD OF MATERIALS FOR USE ON THE SITE SHALL BE AT THE DISCRETION OF THE CONTRACTOR. ALL TESTING OF MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY A CERTIFIED TESTER. RESULTS OF THE TESTS SHALL BE SENT DIRECTLY TO THE PROJECT ENGINEER AS WELL AS THE CONTRACTOR, BY THE LABORATORY. LOCATION AND FREQUENCY OF TESTS SHALL BE DESIGNATED BY THE GENERAL CONTRACTOR.
11. ALL CUT AND FILL SLOPES SHALL BE MAINTAINED AT 2:1.

**GEOTECHNICAL NOTE**

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE PROJECT ENGINEER FOR REQUIRED REVISIONS. THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT ENGINEER FOR REQUIRED SITE OBSERVATIONS AND TESTING OF ALL FILL.

**SHEET INDEX**

- C1.0 COVER SHEET
- C1.0 EXISTING CONDITIONS
- C2.1 GRADING PLAN
- C2.2 FINISHED A/C GRADE
- C3.0 PAVEMENT AREA
- C4.0 STRUCTURE CONVEYANCE
- D5.0 NOT USED
- D8.0 PROJECT DETAILS
- D8.1 PROJECT DETAILS

REVISIONS	DATE

Great Pass • Jacksonville • Midland, OR  
 10000 NE Commercial Center Dr., Astoria, OR 97103  
 Phone: 503-325-1111 Fax: 503-325-1112  
 E-mail: info@emc-engineers.com  
**EMC**  
 -Engineers/Scientists, LLC

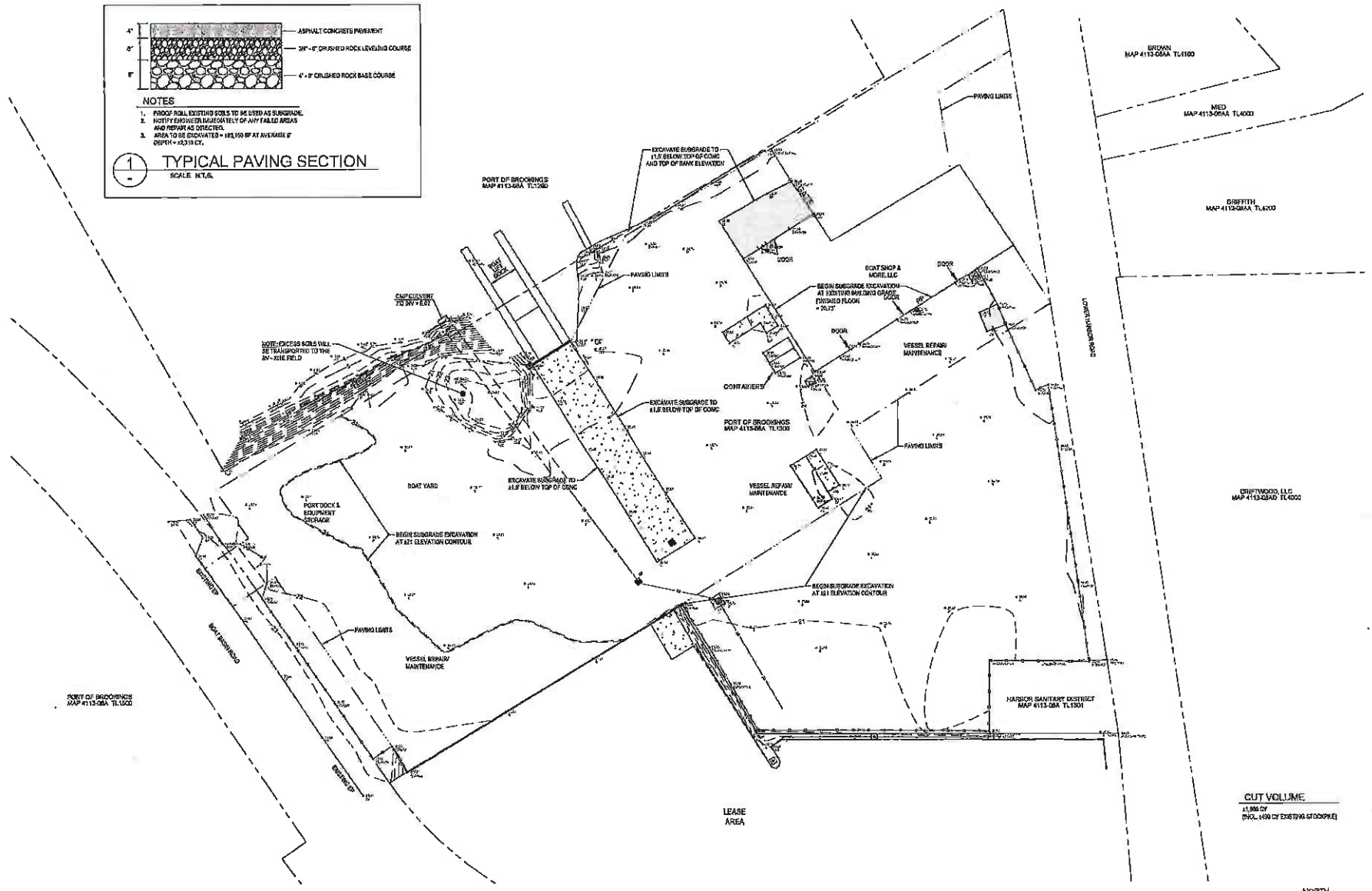
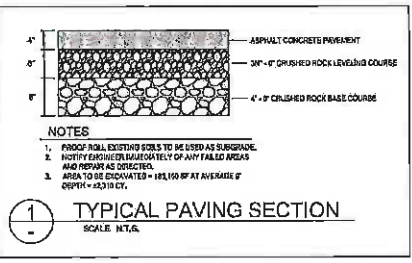


**PORT OF BROOKINGS HARBOR**  
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
**BOAT YARD PAVING**

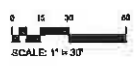
DRAWN BY: JG  
 DATE: 26 JAN 2021  
 JOB No: #  
 SHEET No:

**C1.0**  
 COVER SHEET





CUT VOLUME  
11,866 CY  
(REL. 1490 CY EXISTING ST.00000)

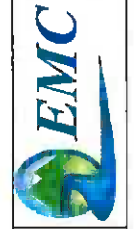


**GRADING PLAN**  
SCALE: 1" = 30' (24/25)



REVISION	DATE	BY	CHKD

Granta Park • Jacksonville • Medford, OR  
 10000 Granta Park Drive, Jacksonville, OR 97137  
 Phone: 503-451-4141 • Fax: 503-451-4142 • Toll Free: 800-377-0488  
**EMC** - Engineers & Scientists, LLC

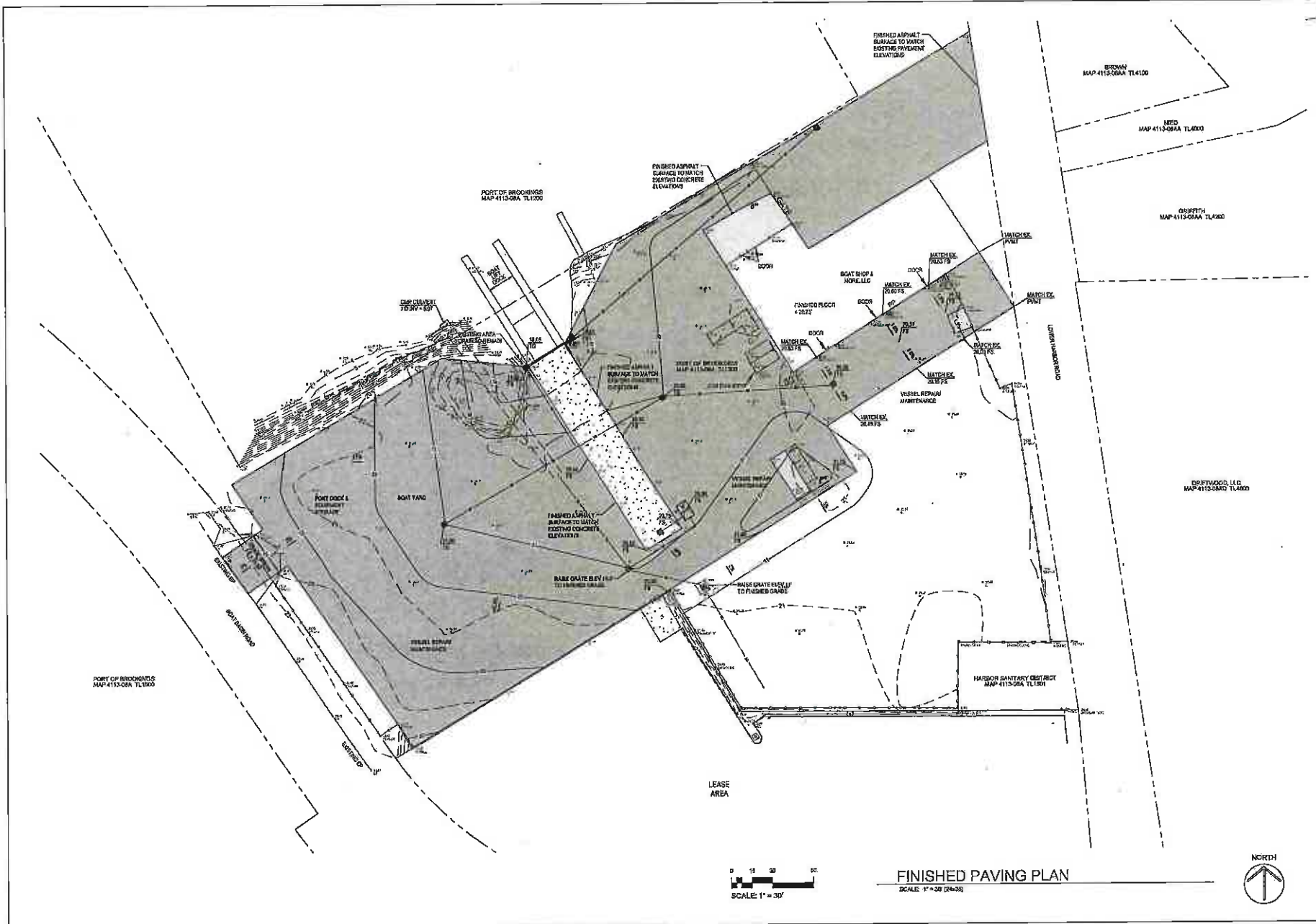


**PORT OF BROOKINGS HARBOR**  
 16330 LOWER HARBOR, BROOKINGS, OR 97415  
**BOAT YARD PAVING**

DRAWN BY: JG  
 DATE: 26 JAN 2021  
 JOB No: #  
 SHEET No: #  
**C2.1**  
 GRADING PLAN

328





DATE	26 JAN 2021
DRAWN BY	JD
JOB No.	3
SHEET No.	3

Create Plans • As-built Plans • Utilities • GIS  
 16330 Lower Harbor Road, Brookings, OR 97415  
 Phone: 541-338-4444 • Fax: 541-338-4444  
[www.emcsci.com](http://www.emcsci.com)  
 - Engineers/Scientists, LLC



**PORT OF BROOKINGS HARBOR**  
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
**BOAT YARD PAVING**

DRAWN BY:	JD
DATE:	26 JAN 2021
JOB No.:	3
SHEET No.:	3
<b>C2.2</b>	<b>FINISHED PAVING PLAN</b>

229

PORT OF BROOKINGS  
MAP 4115-06A TL1500

TOTAL AREA OF NEW  
PAVING = ±104,470 SF

PORT OF BROOKINGS  
MAP 4115-06A TL1500

PORT DOCK &  
EQUIPMENT  
STORAGE

BOAT YARD

41,490 SF

41,220 SF

LEASE  
AREA

BOAT SHIP &  
MORELLC

7,640 SF

8,020 SF

8,203 SF

VESSEL REPAIR  
WORKSPACE

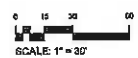
HARBOR SANITARY DISTRICT  
MAP 4115-06A TL1301

BROWN  
MAP 4115-06A TL4100

NETO  
MAP 4115-06A TL4200

GAFFNEY  
MAP 4115-06A TL4200

DRIFTWOOD LLC  
MAP 4115-06A TL4000



PAVEMENT AREA  
SCALE: 1" = 30' (R438)



REVISIONS	BY:

Gracie Pass • Jacksonville • Medford, OR  
 606-444-0000 • 541-754-0000 • 541-754-0007  
 Fax: 541-754-0001 • 541-754-0002 • 541-754-0003  
[www.emc-engineers.com](http://www.emc-engineers.com)

**EMC**  
 Engineers-Scientists, LLC

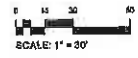
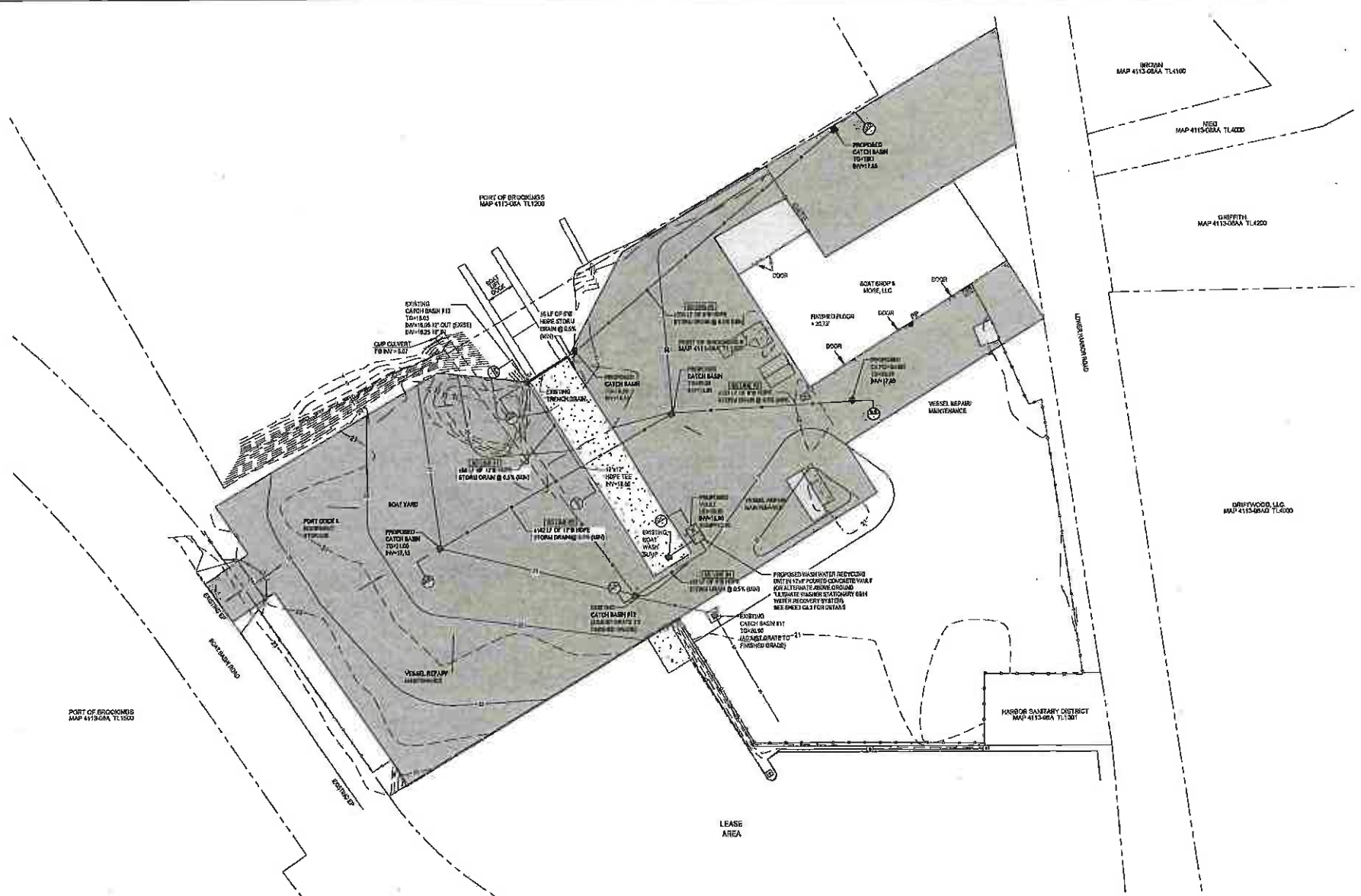


**PORT OF BROOKINGS HARBOR**  
 16330 LOWER HARBOR BLVD, BROOKINGS, OR 97415  
**BOAT YARD PAVING**

DRAWN BY: JGJ  
 DATE: 28 JAN 2021  
 JOB No: 2  
 SHEET No:  
**C3.0**  
 PAVEMENT  
 AREAS

320

231

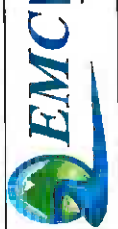


**STORMWATER CONVEYANCE**  
SCALE: 1" = 30' (R130)



REVISIONS	BY

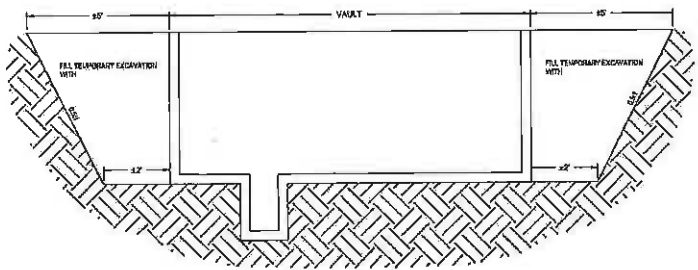
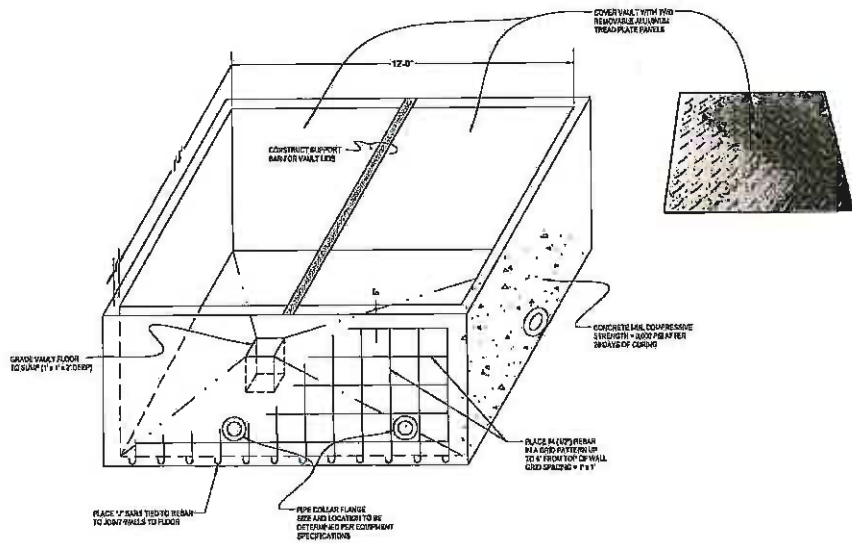
Gravis Pass • Jacksonville • Medford, OR  
 or visit us at [www.emcinc.com](http://www.emcinc.com) Phone: 503.770.1100  
 Fax: 503.770.1100  
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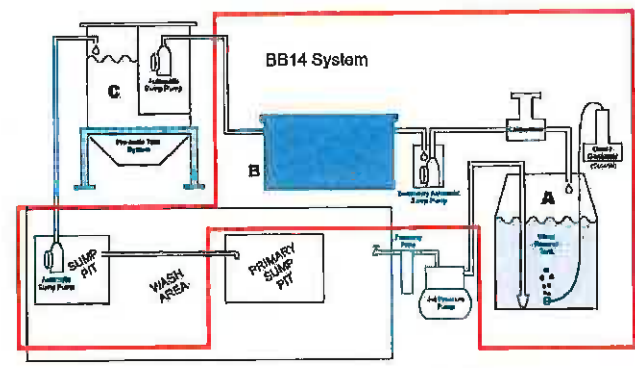
**PORT OF BROOKINGS HARBOR**  
 16830 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
**BOAT YARD PAVING**

DRAWN BY: JJS  
 DATE: 28 JAN 2021  
 JOB No: #  
 SHEET No:  
**C4.0**  
 STORMWATER CONVEYANCE





1 PRELIMINARY WASHWATER RECYCLING VAULT  
SCALE: N.T.S.



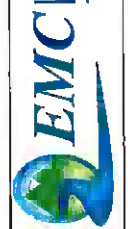
- DESCRIPTION
- FILTERS ARE REACHABLE FROM OUTSIDE
  - 24\"/>



2 ALTERNATE ABOVE-GROUND WASHWATER RECYCLING UNIT  
SCALE: N.T.S.

DATE	BY

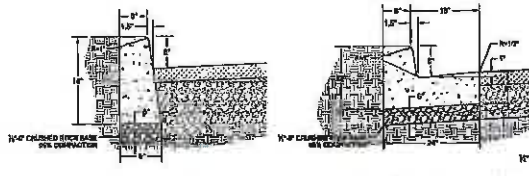
Granta Pass • Jacksonville, OR  
 Jackson, OR  
 16330 Lower Harbor Road, Brookings, OR 97415  
 Phone: (541) 338-1111 Fax: (541) 338-1112  
 Email: info@emcinc.com Website: www.emcinc.com



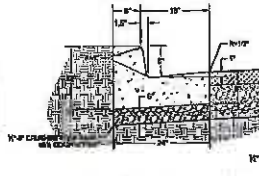
PORT OF BROOKINGS HARBOR  
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
 BOAT YARD PAVING

DRAWN BY:	JG
DATE:	26 JAN 2021
JOB No:	4
SHEET No:	4
<b>C4.2</b>	
WASHWATER RECYCLING DETAILS	

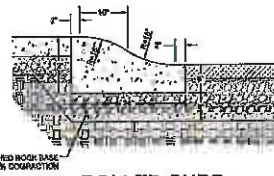
333



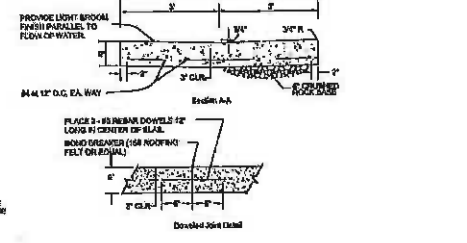
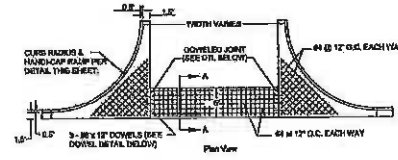
**301 VERTICAL CURB**  
SCALE: NTS



**302 CURB & GUTTER**  
SCALE: NTS

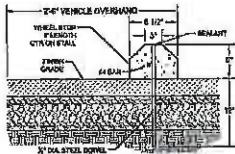


**303 ROLLED CURB**  
SCALE: NTS

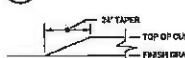


**NOTES**  
1. CONCRETE TO BE OMMERCIAL GRADE CONCRETE (GGC) PER AISC OPTION (RIGHT OF WAY SECTION 0640.00)  
2. SUBGRADE AND BASE SHALL BE LAYED AND FINELY COMPACTED.  
3. VALLEY GUTTER SHALL PASS A WATER TEST TO ASSURE FLOW.

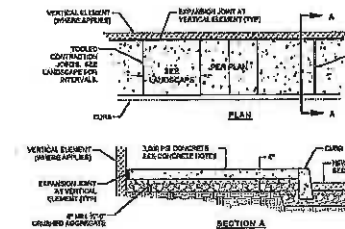
**321 DRIVEWAY APRON WITH VALLEY GUTTER**  
SCALE: 1/8"



**304 WHEEL STOP**  
SCALE: NTS

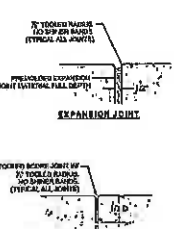


**305 CURB TAPER**  
SCALE: NTS



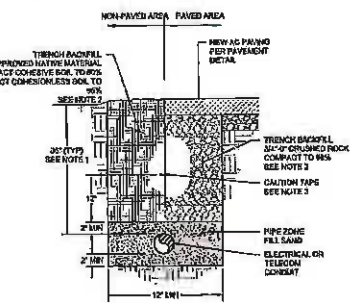
**NOTES**  
1. COMPACT SUBGRADE AND AGGRADATE TO 95% OF MAXIMUM DRY DENSITY. FRESH SHALL BE METALLIC BROOM PERPENDICULAR TO DEFORMATION STRIP.  
2. USE EXPANSION JOINTS AS SHOWN.  
3. GROSS SLOPE OF SIDEWALK SHALL BE 2% AWAY FROM THE CURB.  
4. SEE CONCRETE CONTROL JOINT DETAIL ON THIS SHEET.

**311 CURB LINE CONCRETE SIDEWALK**  
SCALE: NTS



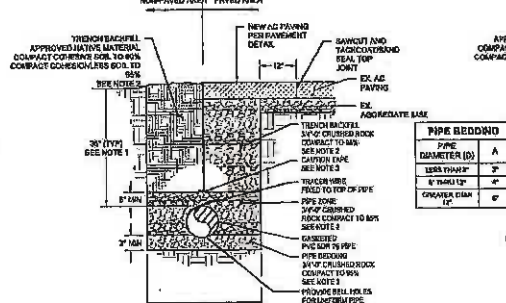
**NOTES**  
1. TOOLED EXPANSION JOINT MATERIAL FILL DEPTH SHALL BE 1/2\"/>

**309 CONCRETE CONTROL JOINTS**  
SCALE: NTS



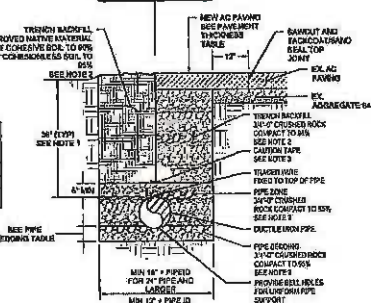
**NOTES**  
1. COVER OVER PIPE SHALL VARY FROM 18\"/>

**583 CONDUIT TRENCH DETAIL**  
SCALE: NTS



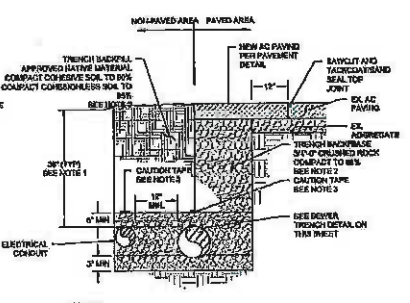
**NOTES**  
1. COVER OVER PIPE SHALL VARY FROM 18\"/>

**581 SEWER TRENCH DETAIL**  
SCALE: NTS



**NOTES**  
1. COVER OVER PIPE SHALL VARY FROM 18\"/>

**580 WATER TRENCH DETAIL**  
SCALE: NTS



**NOTES**  
1. COVER OVER PIPE SHALL VARY FROM 18\"/>

**584 JOINT TRENCH DETAIL**  
SCALE: NTS

PIPE BEDDING	PIPE DIAMETER (D)	A
1	8" THROUGH 12"	3"
2	12" THROUGH 18"	4"
3	18" THROUGH 24"	6"
4	24" THROUGH 30"	8"
5	30" THROUGH 36"	10"
6	36" THROUGH 42"	12"
7	42" THROUGH 48"	14"
8	48" THROUGH 54"	16"
9	54" THROUGH 60"	18"
10	60" THROUGH 66"	20"
11	66" THROUGH 72"	22"
12	72" THROUGH 78"	24"
13	78" THROUGH 84"	26"
14	84" THROUGH 90"	28"
15	90" THROUGH 96"	30"
16	96" THROUGH 102"	32"
17	102" THROUGH 108"	34"
18	108" THROUGH 114"	36"
19	114" THROUGH 120"	38"
20	120" THROUGH 126"	40"
21	126" THROUGH 132"	42"
22	132" THROUGH 138"	44"
23	138" THROUGH 144"	46"
24	144" THROUGH 150"	48"
25	150" THROUGH 156"	50"
26	156" THROUGH 162"	52"
27	162" THROUGH 168"	54"
28	168" THROUGH 174"	56"
29	174" THROUGH 180"	58"
30	180" THROUGH 186"	60"
31	186" THROUGH 192"	62"
32	192" THROUGH 198"	64"
33	198" THROUGH 204"	66"
34	204" THROUGH 210"	68"
35	210" THROUGH 216"	70"
36	216" THROUGH 222"	72"
37	222" THROUGH 228"	74"
38	228" THROUGH 234"	76"
39	234" THROUGH 240"	78"
40	240" THROUGH 246"	80"
41	246" THROUGH 252"	82"
42	252" THROUGH 258"	84"
43	258" THROUGH 264"	86"
44	264" THROUGH 270"	88"
45	270" THROUGH 276"	90"
46	276" THROUGH 282"	92"
47	282" THROUGH 288"	94"
48	288" THROUGH 294"	96"
49	294" THROUGH 300"	98"
50	300" THROUGH 306"	100"

EMC  
 Grand Pass • Jacksonville • Medford, OR  
 16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
 PORT OF BROOKINGS HARBOR  
 BOAT YARD PAVING  
 DRAWN BY: JG  
 DATE: 26 JAN 2021  
 JOB No: 8  
 SHEET No:  
 C6.0  
 PROJECT DETAILS

334



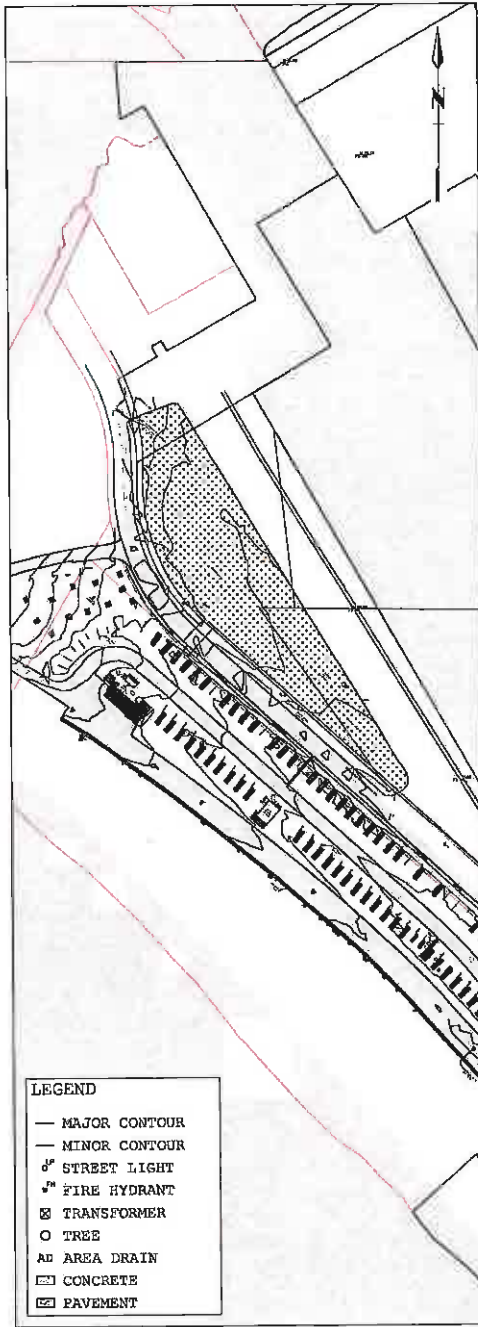




237



PORT OF BROOKINGS-HARBOR  
TAX LOTS



PORT OF BROOKINGS-HARBOR  
TOPOGRAPHIC SURVEY



PORT OF BROOKINGS-HARBOR  
EXISTING ACTION AREA



ENGINEER: **EMC**  
Charles E. Mackenzie, P.E. - Registered Professional Engineer  
 License No. 12345 - State of Oregon  
 - Registered Professional Engineer

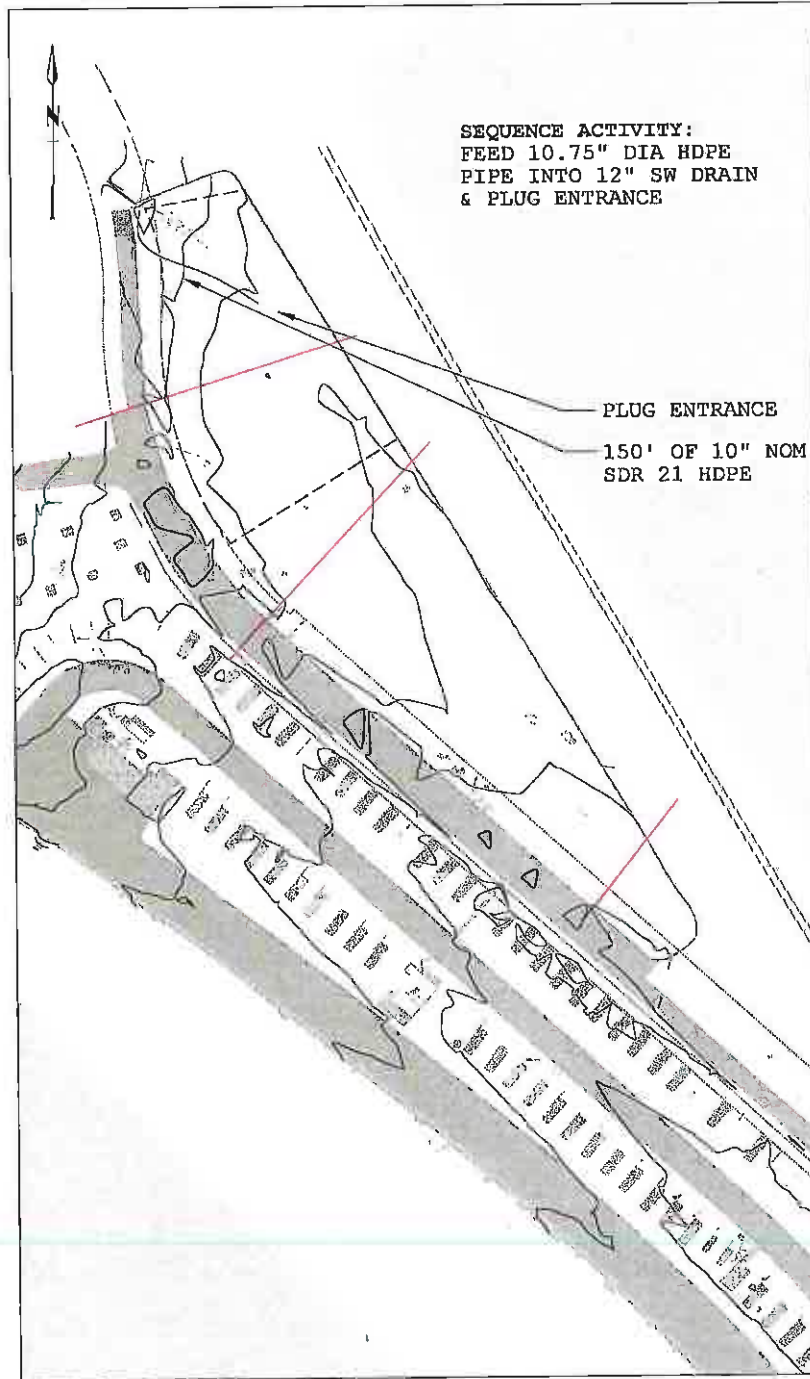
No.	DATE	REVISION

**PORT OF BROOKINGS**  
16820 Lower Harbor Rd., Brookings, OR 97415  
 NOTE FIELD RV PARK  
 FILE NUM: PB116

Date: 17/01/21  
 Drawn By: INFRADRAFT  
 Sheet No. **C1.1**  
 EXISTING CONDITIONS



SEQUENCE #0: EXISTING CONDITIONS  
SCALE 1":80'



SEQUENCE #1: SEDIMENT & COLLECTION AREA  
SCALE 1":80'

SEQUENCE ACTIVITY:  
FEED 10.75" DIA HDPE  
PIPE INTO 12" SW DRAIN  
& PLUG ENTRANCE

PLUG ENTRANCE

150' OF 10" NOM.  
SDR 21 HDPE

338



ENGINEER:

EMC  
ENGINEERING & CONSULTING, LLC

NO.	DATE	REVISION	BY

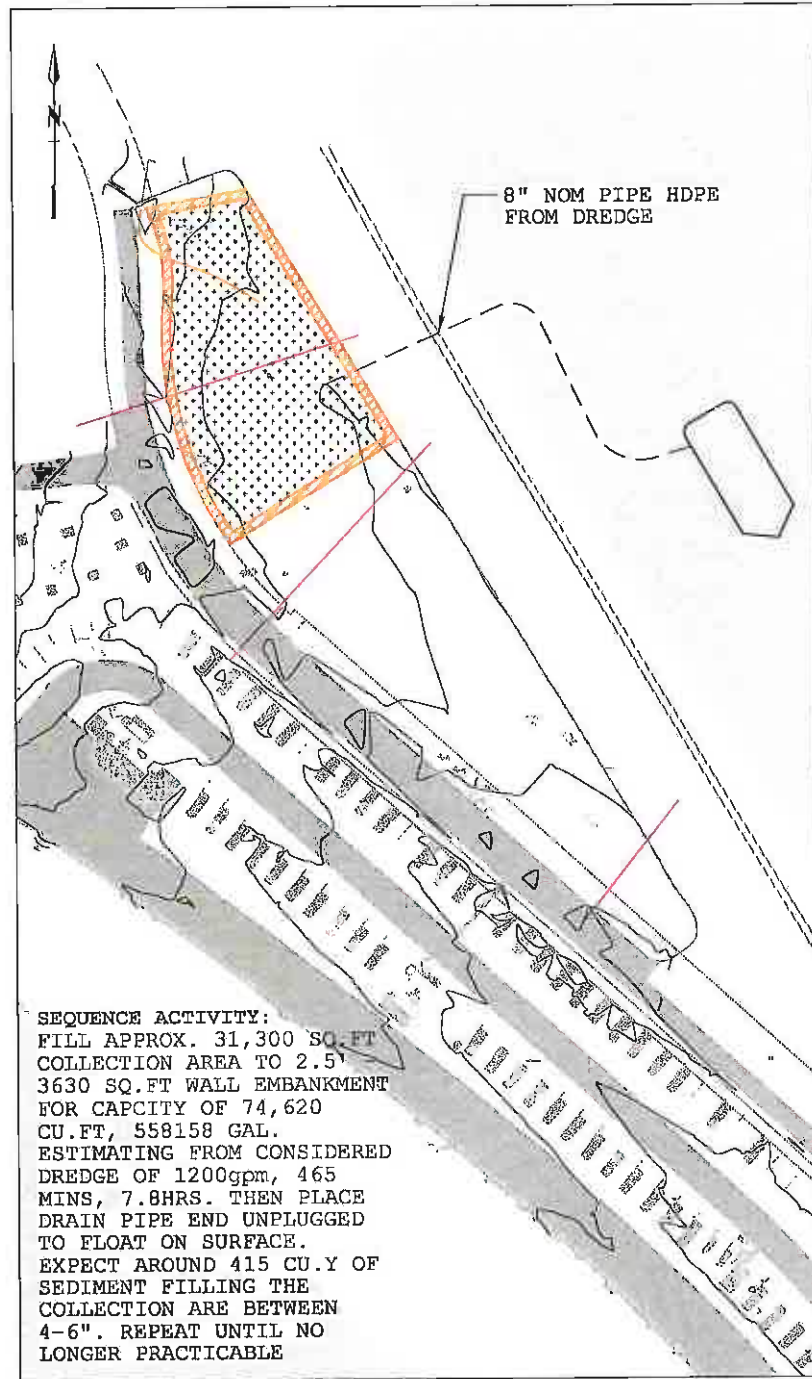
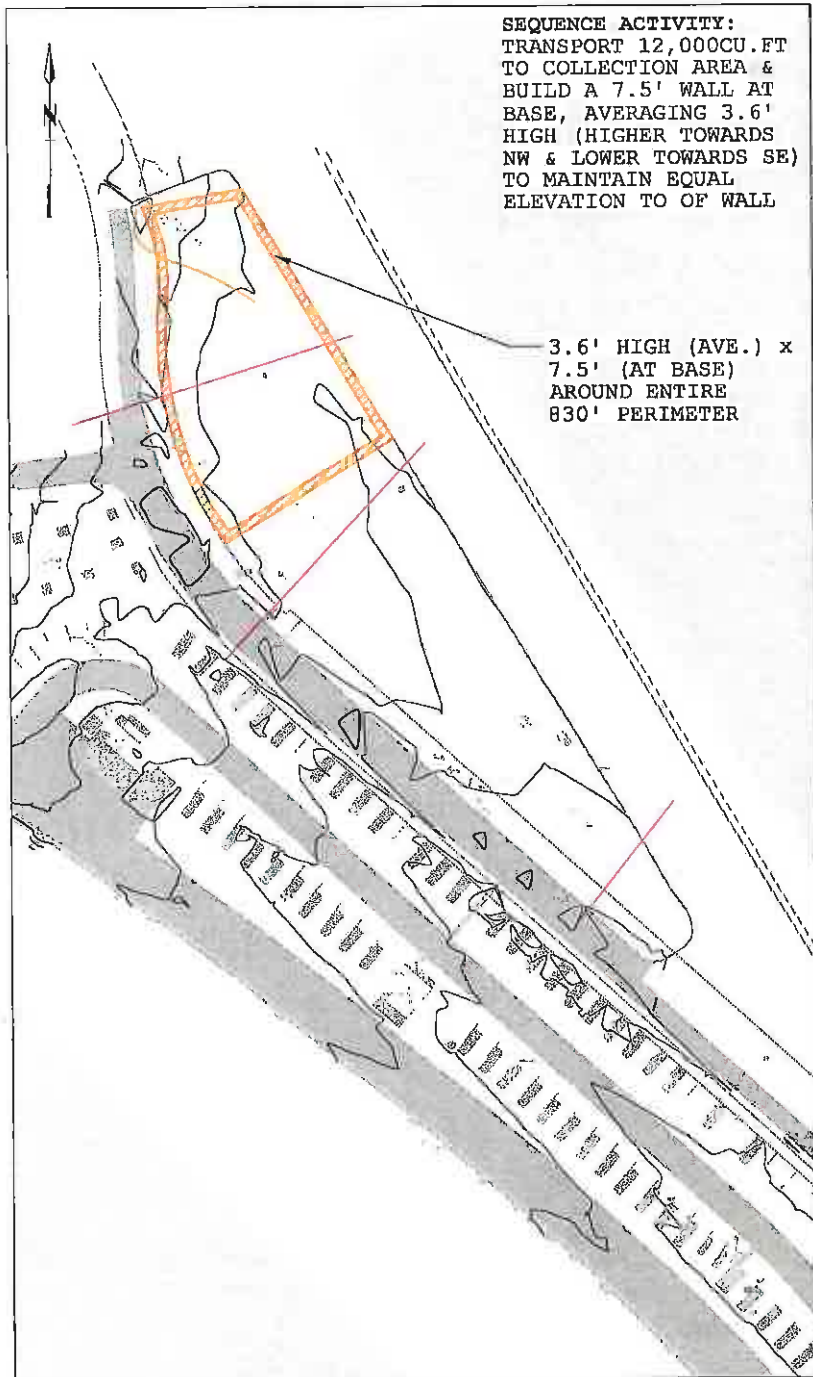


**PORT OF BROOKINGS**  
16330 Lower Harbor Rd, Brookings, OR 97415  
KITE FIELD RV PARK  
FILE NUM: PB116

Date  
17/01/2021

Drawn By  
INFRADRAFT

Sheet No.  
**C2.0**  
SEQUENCING



339

SEQUENCE #2: PERIMETER WALL  
 SCALE 1":80'

SEQUENCE #3: FILLING PART 1  
 SCALE 1":80'



ENGINEER:  
 EMC  
 Environmental Management Corporation, LLC  
 16380 Lower Harbor Rd, Brookings, OR 97415  
 KITE FIELD RV PARK  
 FILE NUM: PB116

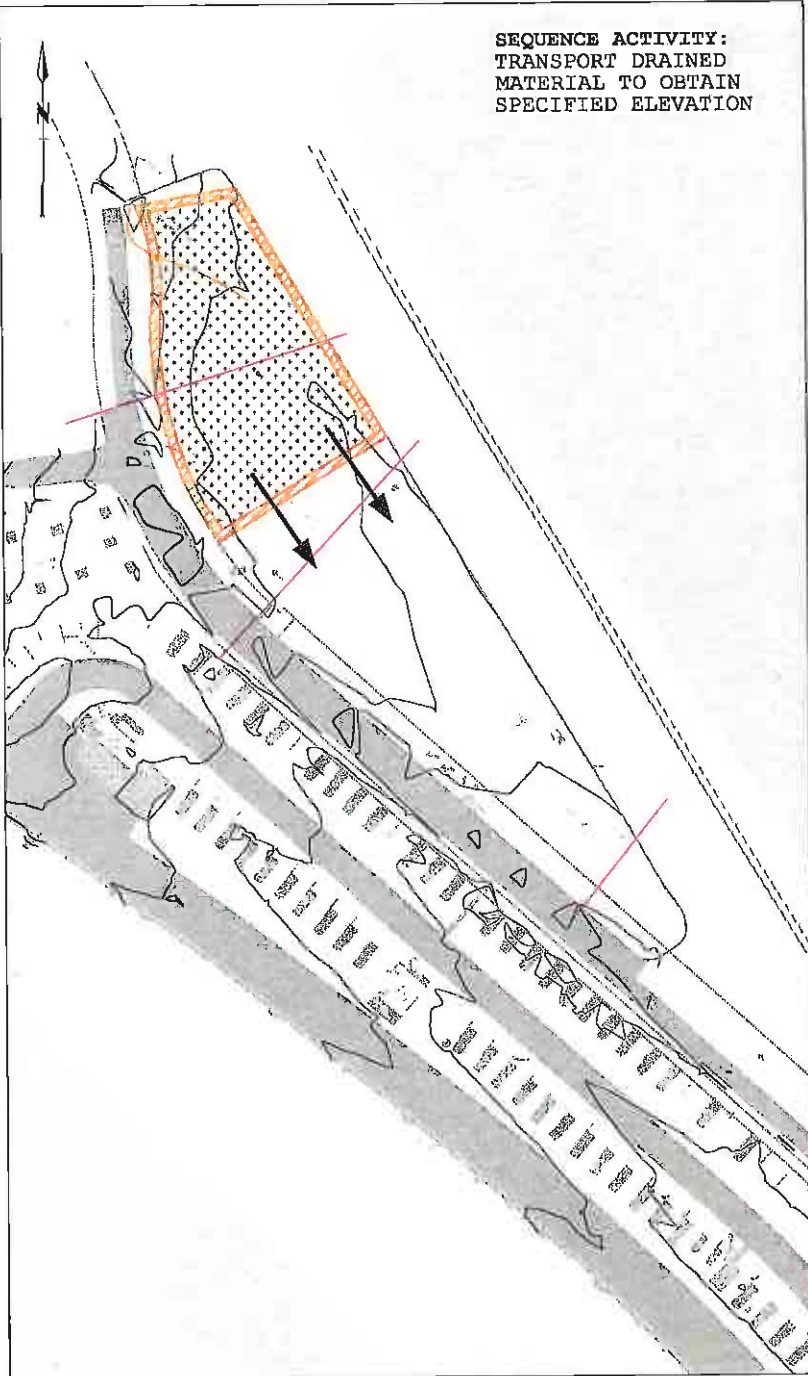
NO.	DATE	BY	REVISION



**PORT OF BROOKINGS**  
 16380 Lower Harbor Rd, Brookings, OR 97415  
 KITE FIELD RV PARK  
 FILE NUM: PB116

Date  
 17/01/2021  
 Drawn By  
 INFRADRAFT  
 Sheet No.  
**C2.1**  
 SEQUENCING

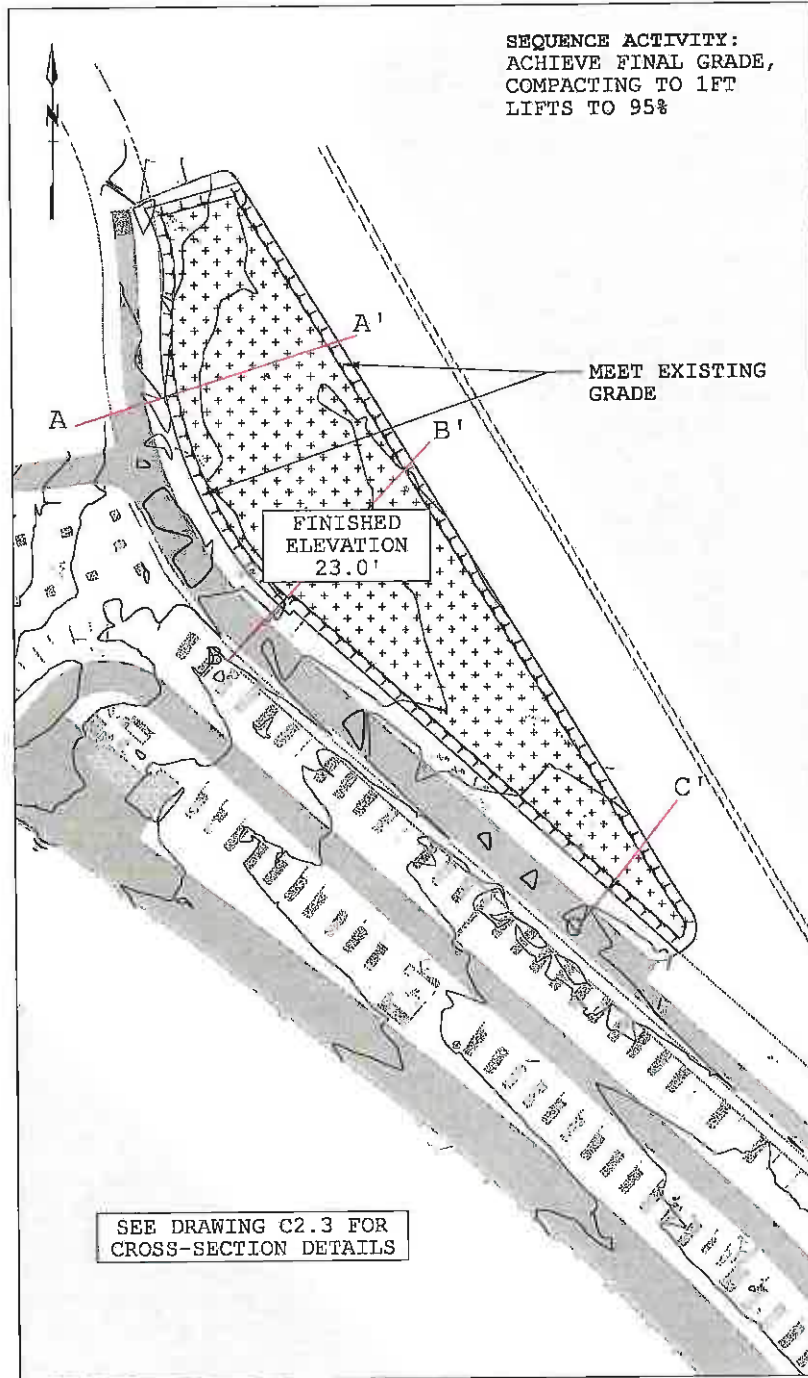
SEQUENCE ACTIVITY:  
 TRANSPORT DRAINED  
 MATERIAL TO OBTAIN  
 SPECIFIED ELEVATION



34

SEQUENCE #4: TRANSPORT MATERIAL  
 SCALE 1":80'

SEQUENCE ACTIVITY:  
 ACHIEVE FINAL GRADE,  
 COMPACTING TO 1FT  
 LIFTS TO 95%



SEE DRAWING C2.3 FOR  
 CROSS-SECTION DETAILS

SEQUENCE #5: GRADING AND COMEPACTION  
 SCALE 1":80'



NO.	DATE	REVISION	BY



**PORT OF BROOKINGS**  
 16890 Lower Harbor Rd, Brookings, OR 97415  
 KITE FIELD RV PARK  
 FILE NUM: PB116

Date: 17/01/2021  
 Drawn By: INFRADRAFT  
 Sheet No.: C2.2  
 SEQUENCING

EMC-Engineers-Scientists, LLC-Oregon-US-oct 26, 2020.XLSX

Client: Jack Akin - EMC-Engineers-Scientists, LLC-Oregon-US (Date: Oct 26, 2020)  
 Project: SHM feasibility (Author: Maurice)

**Mixture Details**

Solids concentration in the mixture  
 % by volume 25%  
 corresponding to % by weight 40%  
 Solid Particle Dimension  
 Particle Median Diameter d50 > 15 mm  
 Liquid SG 1  
 Solids SG 2  
 Mixture Specific Gravity 1.25  
 Fluid dynamic viscosity 0.001 Pa s



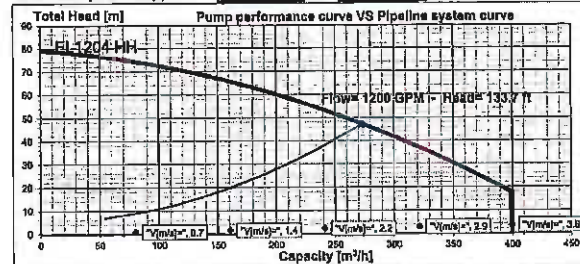
**Application Details**

Geodetic Height (Air) = H 1.2 m 4 ft  
 Geodetic Height (Water) = P 15.2 m 50 ft  
 Pipeline Total Length = L 814.4 m 3000 ft  
 Pipe Internal Diameter = DN 198.2 mm 7.803 inch  
 Total Mixture Capacity 273 m³/h 1200 GPM

**System TDH at set capacity**

BLURRY [m]	BLURRY [ft]	REQUIRED POWER
Friction loss along the pipeline	<u>35.3 m</u>	<u>116.7 ft</u>
Concentrated pressure drops	<u>0.6 m</u>	<u>1.8 ft</u>
Geodetic: H-H <sub>0</sub> (m) SG <sub>0</sub> (to SG <sub>1</sub> ) P	<u>5.0 m</u>	<u>16.5 ft</u>
Total Dynamic Head (TDH)	<u>40.9 m</u>	<u>133.7 ft</u>
Mixture velocity inside the pipeline	<u>2.6 m/s</u>	<u>8.0 ft/s</u>

PUMP POWER 120 HP

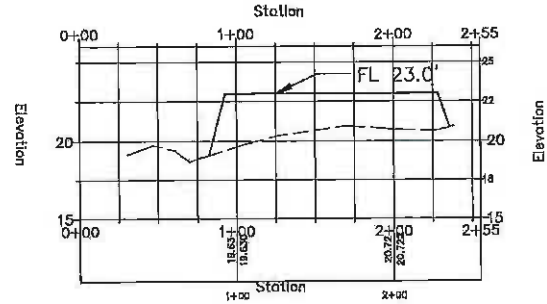


\* All the above values come from theoretical calculations. The solids concentration can vary from 10% to 90% pump capacity due to the kind of material to be pumped, the delivery distance, the working depth, the static head and to the ability of the operator to keep the pump's agitator in constant contact with the material to be pumped.  
 Max production with soft sand and left both well divided while the efficiency decrease significantly with hard and plastic clay.

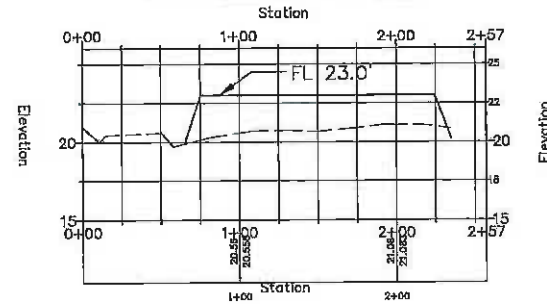
SEDIMENT DRAGFLOW SPECIFICATIONS

341

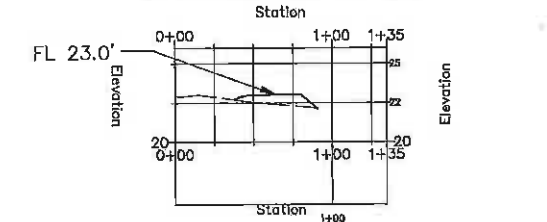
SECTION AA PROFILE



SECTION BB PROFILE



SECTION CC PROFILE



CROSS-SECTIONS NTs  
 SEE DRAWING C2.2



NO.	DATE	BY



PORT OF BROOKINGS  
 16990 Lower Harbor Rd, Brookings, OR 97415  
 KITE FIELD RV PARK  
 FILE NUM: PB116

Date 17/01/2021  
 Drawn By INFRADRAFT  
 Sheet No. C2.3  
 GENERAL NOTES



242



KITE FIELD RV PARK PRELIMINARY LAYOUT  
 SCALE 1"=50'



**PORT OF BROOKINGS**

16990 Lower Harbor Rd, Brookings, OR 97415

KITE FIELD RV PARK  
 FILE NUM: PB116

Date 17/01/2021

Drawn By INFRADRAFT

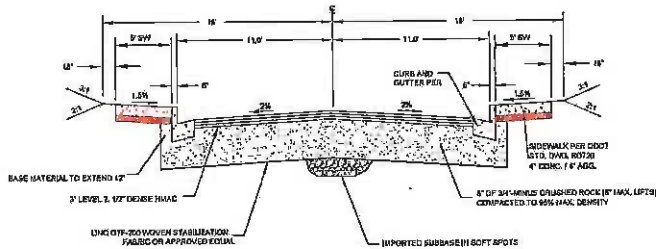
Sheet No. **C3.0**  
 PRELIM LAYOUT



ENGINEER



NO.	DATE	REVISION



### STREET SECTION

SCALE: NTS  
THE PORT OF BROOKINGS HARBOR STREET STANDARDS

#### NOTES

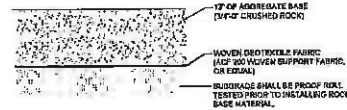
1. AGGREGATE BASE AND SUBBASE SHALL BE INSTALLED IN MAXIMUM 6" LIFTS AND MECHANICALLY COMPACTED TO MINIMUM 90% OF THE MAXIMUM DENSITY IN ACCORDANCE WITH THE AASHTO T99 METHOD.
2. JUST PRIOR TO PAVING, THE AGGREGATE BASE SHALL BE PROOF ROLLED. AGGREGATES THAT DO NOT PASS PROOF ROLL TESTING SHALL BE REMOVED, RECOMPACTED, AND TESTED AGAIN.
3. JUST PRIOR TO INSTALLING AGGREGATE BASE ROCK THE SUBGRADE SHALL BE PROOF ROLLED. SUBGRADE MATERIAL THAT DOES NOT PASS PROOF ROLL TESTING SHALL BE REMOVED AND ADDITIONAL CRUSHED ROCK INSTALLED.
4. PAVEMENT SECTION IS BASED ON THE ASSUMPTION THAT PAVEMENT CONSTRUCTION WILL BE ACCOMPLISHED DURING THE DRY SEASON.
5. PAVEMENTS SUBJECT TO CONSTRUCTION TRAFFIC MAY REQUIRE REPAIR.

### GENERAL NOTES

1. MAXIMUM CUT AND FILL IS OPEN SHALL BE MAXIMUM OF 3:1 FOR FILL AND MAXIMUM OF 2:1 FOR CUT.
2. FINE GRADE AS SHOWN, ENVIRONMENT, WHERE ROCKS SHALL BE CONSTRUCTED FROM SELECT NATIVE SOILS.
3. IMPORTED SUBBASE (WHERE APPLICABLE) TO BE 4" CRUSHED ROCK.

### CONCRETE NOTES

1. PROVIDE A MINIMUM 6" TRANSITION SECTION WHEN JOINS OF CURBS OF DIFFERENT GRADES SECTIONS.
2. CONCRETE SHALL NOT BE PLACED UNTIL FORMS HAVE BEEN INSPECTED AND APPROVED.
3. CONCRETE SHALL BE COMMERCIAL GRADE RETAINING THE FOLLOWING CHARACTERISTICS: ENTRAINED AIR - 0.2% TO 0.24% SLUMP - 3" INCHES OR LESS; COMPRESSIVE STRENGTH - MINIMUM 3,000 PSI AT 28 DAYS; TEMPERATURE - MINIMUM 50°F TO MAXIMUM 90°F.
4. ALL CONCRETE STRUCTURES REINFORCED WITH REBAR SHALL BE VIBRATED TO REMOVED VOID.
5. SURFACE SHALL HAVE A FINISH TEXTURE THAT WILL NOT BE SLICK WHEN WET (MEDIUM BRUSH FINISH). CURING COMPOUND MAY BE APPLIED IMMEDIATELY AFTER CONCRETE IS FINISHED, WHITE PLASTER RECOMMENDED, CLEAN ACCEPTABLE.
6. AN EDDING TOOL SHALL BE USED ON ALL JOINTS AND CORNERS.
7. PROVIDE CONTRACTION JOINTS AT 12' INTERVALS AND "DUMPT" TOGGLED JOINTS AT 6' INTERVALS ON CURBS, SIDEWALKS AND PARAPETS. CONTRACTION JOINT ENDS SHALL BE AT MINIMUM 1/4" DEEP OR COUNTERED THE THICKNESS OF THE CONCRETE.
8. PROVIDE EXPANSION JOINTS OPPOSITE PARAPETS EXPANSION JOINTS IN BRITISH CONCRETE, AT EACH POINT OF TANGENCY IN THE STRUCTURE ALIGNMENT, BETWEEN DRIVEWAYS AND COULD BE PAVEMENT, AROUND POLES, POSTS, BARS AND OTHER FIXTURES WHICH PROTRUDE THROUGH OR AGAINST THE STRUCTURE, AT ALL CURBS AND CORNERS, AT MAXIMUM OF 100' INTERVALS. EXPANSION JOINT MATERIAL SHALL BE OF THE RITUNGUS, POLYURETHANE FILLER, TESTED NOT LESS THAN 1/4" WOOD, PLASCO FLASH OR 40 MORE THAN 1/4" BELOW THE CONCRETE SURFACE.
9. STAIRWELL END CORNER SHALL NOT HAVE MORE THAN 1/4" UNDER A TWELVE-FOOT STRAIGHT EDGE.
10. CURB AND PROTECT CONCRETE AFTER PLACING AND FINISHING, KEEP STRUTS OPEN FREE FROM CONTACT, STORM AND PUBLIC TRAFFIC FOR AT LEAST SEVEN DAYS OR LONGER, AS DIRECTED, UNLESS OTHERWISE SPECIFIED. KEEP TRAFFIC OFF OF CONCRETE UNTIL CURED.
11. CONCRETE SHALL BE REMOVED TO THE WORKING CONTRACTION JOINT, CORNER OR CRACK WITHIN 4" OF THE REPLACEMENT AREA. CONCRETE SHALL BE SAW CUT WITH A SHOCKEY LAMPING JOINT PROVIDED.
12. EXCESSIVE AIR SHALL BE REMOVED BY PLACING ALONG ENTIRE CURB SECTION TO A MINIMUM 1/4" UNLESS APPROVED BY ENGINEER OF RECORD.

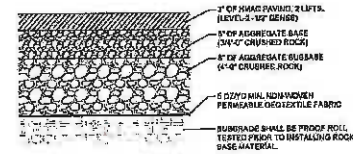


#### NOTES

1. AGGREGATE BASE AND SUBBASE SHALL BE INSTALLED IN MAXIMUM 6" LIFTS AND MECHANICALLY COMPACTED TO MINIMUM 90% OF THE MAXIMUM DENSITY IN ACCORDANCE WITH THE AASHTO T99 METHOD.
2. JUST PRIOR TO INSTALLING AGGREGATE BASE ROCK THE SUBGRADE SHALL BE PROOF ROLLED. SUBGRADE MATERIAL THAT DOES NOT PASS PROOF ROLL TESTING SHALL BE REMOVED AND ADDITIONAL CRUSHED ROCK INSTALLED.

### EMERGENCY VEHICLE GRAVEL SECTION

SCALE: NTS

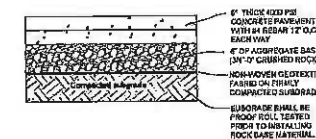


#### NOTES

1. AGGREGATE BASE AND SUBBASE SHALL BE INSTALLED IN MAXIMUM 6" LIFTS AND MECHANICALLY COMPACTED TO MINIMUM 90% OF THE MAXIMUM DENSITY IN ACCORDANCE WITH THE AASHTO T99 METHOD.
2. JUST PRIOR TO PAVING, THE AGGREGATE BASE SHALL BE PROOF ROLLED. AGGREGATES THAT DO NOT PASS PROOF ROLL TESTING SHALL BE REMOVED, RECOMPACTED, AND TESTED AGAIN.
3. JUST PRIOR TO INSTALLING AGGREGATE BASE ROCK THE SUBGRADE SHALL BE PROOF ROLLED. SUBGRADE MATERIAL THAT DOES NOT PASS PROOF ROLL TESTING SHALL BE REMOVED AND ADDITIONAL CRUSHED ROCK INSTALLED.
4. PAVEMENT SECTION IS BASED ON THE ASSUMPTION THAT PAVEMENT CONSTRUCTION WILL BE ACCOMPLISHED DURING THE DRY SEASON.
5. PAVEMENTS SUBJECT TO CONSTRUCTION TRAFFIC MAY REQUIRE REPAIR.

### ASPHALT SECTION - DRIVE AISLES

SCALE: NTS



#### NOTES

1. 3/4\"/>
2. JUST PRIOR TO INSTALLING AGGREGATE BASE ROCK THE SUBGRADE SHALL BE PROOF ROLLED. SUBGRADE MATERIAL THAT DOES NOT PASS PROOF ROLL TESTING SHALL BE REMOVED, INSTALL ADDITIONAL CRUSHED ROCK FOR BENEATHS RECOMMENDATIONS.

### REINFORCED CONCRETE SECTION

SCALE: NTS

EMC

Engineering & Construction Solutions, LLC

**PORT OF BROOKINGS HARBOR**  
16330 LOWER HARBOR ROAD, BROOKINGS, OR 97415

**KITE FIELD RV PARK**

DRAWN BY:	TAM
DATE:	17/01/21
JOB NO:	20-XXX

C4.0

ROAD SECTIONS

343

## GENERAL NOTES

1. ALL WORK SHALL BE IN CONFORMANCE WITH ALL FEDERAL, STATE, AND LOCAL CODES. SPECIFICATIONS AND STANDARDS SHALL MEAN, AND ARE REFERRED TO, THE LATEST EDITION, AMENDMENT OR REVISION OF SUCH REFERENCED STANDARDS IN EFFECT AS OF THE DATE OF THE CONTRACT DOCUMENTS. APPLICABLE CODES INCLUDE BUT ARE NOT LIMITED TO:
  - 1.1. CURRENT OREGON STRUCTURAL SPECIALTY CODE
  - 1.2. CURRENT OREGON PLUMBING SPECIALTY CODE
  - 1.3. CURRENT OREGON ELECTRICAL SPECIALTY CODE
  - 1.4. NATIONAL FIRE PROTECTION ASSOCIATION
  - 1.5. CURRENT CLATSOP COUNTY STANDARDS SPECIFICATIONS FOR PUBLIC WORKS INFRASTRUCTURE.
2. WORK AND MATERIALS SHALL CONFORM TO THE PROVISIONS OF THE CURRENT "STANDARD SPECIFICATIONS FOR CONSTRUCTION" (OSHA) (AMERICAN PUBLIC WORKS ASSOCIATION (AWWA) UNLESS OTHERWISE COVERED BY THE SPECIFICATIONS WRITTEN FOR THIS PROJECT OR THE COUNTY SPECIFICATIONS).
3. ALL WORK PERTAINING TO THIS PROJECT SHALL BE SUBJECT TO INSPECTION BY THE PROJECT ENGINEER AND/OR CITY ENGINEER, PRIOR TO ANY SITE WORK. THE CONTRACTOR SHALL CONTACT THE CITY AND PROJECT ENGINEER TO SCHEDULE A PRE-CONSTRUCTION CONFERENCE.
4. PRIOR TO ANY SITE DISTURBING ACTIVITY INCLUDING CLEARING, LOGGING OR GRADING, THE SITE ACQUISITION CLEARING LINES AND ZONING ON THESE PLANS SHALL BE LOCATED AND IDENTIFIED BY THE PROJECT SURVEYOR AND ALL EGRESS MARKERS SHALL BE INSTALLED AS IDENTIFIED ON THE EROSION & SEDIMENT CONTROL PLAN.
5. A COPY OF THESE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
6. ALL SITE WORK IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THESE APPROVED PLANS. ANY DEVIATION FROM THESE PLANS WILL REQUIRE PRIOR APPROVAL FROM THE OWNER, ENGINEER AND APPROPRIATE PUBLIC AGENCIES PRIOR TO FIELD CHANGES TO THE CHANGE IN THE FIELD.
7. ALL LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD THEREFORE BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS AND TO FURTHER DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN HEREON WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN. THE CONTRACTOR SHALL CONTACT THE UNDERGROUND UTILITIES LOCATOR SERVICE (UUL) AT LEAST TWO BUSINESS DAYS PRIOR TO CONSTRUCTION. THE AGENCY OR REPRESENTATIVE AND THE ENGINEER SHALL BE CONTACTED IMMEDIATELY IF CONFLICTS EXIST.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NECESSARY TO PROTECT THE LIFE, HEALTH AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACT.
9. THE CONTRACTOR SHALL KEEP OFF-SITE STREETS CLEAN AT ALL TIMES BY SWEEPING. STREET WASHING WILL NOT BE ALLOWED WITHOUT PRIOR CITY APPROVAL.
10. THE CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS PRIOR TO INITIATING WORK. THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER WHEN CONFLICTS OCCUR BETWEEN THE PLANS AND FIELD CONDITIONS. CONTACT SHALL BE RESERVED PRIOR TO PROCEEDING WITH CONSTRUCTION. REVISIONS SHALL BE FORMALLY APPROVED BY THE APPLICANT AND PROJECT ENGINEER PRIOR TO MAKING CHANGES IN THE FIELD.
11. UNLESS OTHERWISE NOTED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ANY UTILITY RELOCATIONS WITH UTILITY COMPANIES.
12. ALL NEW UTILITIES SHALL BE INSTALLED UNDERGROUND.
13. CONTRACTOR SHALL DOCUMENT AND RECORD FIELD CHANGES, PIPE INVERT, PIPE SIZES, AND ANY OTHER CRITICAL AS-CONSTRUCT DATA. ANNUAL OBSERVATION AND VISUAL REPORTS WILL BE REQUIRED BY THE CITY FOR APPROVAL.
14. WORK IN A COUNTY RIGHT-OF-WAY REQUIRES AN EMBLEMMENT PERMIT FROM THE LOCAL AUTHORITY.
15. APPROVED PERMANENT TRAFFIC CONTROL SIGNS AND MARKINGS WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE INSTALLED PRIOR TO FINAL APPROVAL.
16. DURING PROJECT CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL TEMPORARY CONSTRUCTION SIGNS, TRAFFIC CONTROL SIGNS, DELINEATORS AND TEMPORARY MARKINGS AS REQUIRED.
17. ACCESS BY EMERGENCY VEHICLES SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
18. ALL CLEARED AND CRUSHED MATERIAL SHALL BE REMOVED FROM THE CONSTRUCTION SITE AND DISPOSED AT AN APPROVED LOCATION.
19. ALL AREAS WITH ABANDONED UTILITY LINES, STORM DRAINS, UNDERGROUND TANKS, ETC. WHICH MAY PROVIDE VOID SPACE BENEATH THE SURFACE SHALL BE REMOVED, WELDED APPROVED BY THE ENGINEER THE VOID SPACE MAY BE FILLED WITH APPROVED MATERIAL. ALL TANKS OR HAZARDOUS MATERIAL SHALL BE DEALT WITH IN ACCORDANCE TO ALL LOCAL, STATE AND FEDERAL LAWS.
20. PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY EXISTING SURFACE LOCATIONS AND MATCHINGS OF EXISTING GRADE LOCATIONS.
21. CONTRACTOR IS RESPONSIBLE FOR ANY ASPHALT GRINDING, OVERLAY AND MAINTENANCE. ALL SPECIFICATIONS SHALL COMPLY WITH ALL LOCAL AUTHORITY REQUIREMENTS.
22. CONSTRUCTION SHALL CONFORM TO THE 2015 STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION PUBLISHED BY THE OREGON CHAPTER OF AASHTO AND THE CURRENT AMENDMENTS OF THE APPLICABLE AGENCY.
23. ALL CONCRETE SHALL BE 3000 PSI AT 28 DAYS UNLESS OTHERWISE SPECIFIED.
24. CONTRACTOR SHALL BE RESPONSIBLE TO CLEAR AND/OR MAINTAIN EXISTING PUBLIC STREETS OF SOIL OR OTHER DEBRIS DEPOSITED BY CONSTRUCTION OPERATIONS AND REPAIR ALL STREETS DAMAGED BY CONSTRUCTION OPERATIONS BY A TIMELY MANNER TO AVOID INCONVENIENCE OR DAMAGE TO THE PUBLIC.
25. CONTRACTOR SHALL NOTIFY OREGON UTILITY NOTIFICATION CENTER AT 1-800-353-3344.
26. ALL CONTRACTORS AND SUBCONTRACTORS SHALL BE PRE-QUALIFIED WITH THE PORT OF BROOKINGS HARBOR PRIOR TO ANY CONSTRUCTION OF THIS PROJECT.
27. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN AND SECURE APPROVAL OF THE PLAN FROM THE AGENCY AT LEAST FIVE (5) WORKING DAYS PRIOR TO STARTING WORK.
28. THE CONTRACTOR SHALL NOT PERFORM WORK WITHOUT AGENCY INSPECTIONS WHERE INSPECTIONS ARE REQUIRED BY THE SPECIFICATIONS.
29. WHERE CONNECTING TO AN EXISTING PIPE, THE CONTRACTOR SHALL EXPOSE THE END OF THE EXISTING PIPE AND ALLOW THE ENGINEER TO VERIFY EXISTING LOCATION AND ELEVATION BEFORE LAYING ANY NEW PIPE TO THIS EXISTING.
30. REQUESTS BY THE CONTRACTOR FOR CHANGES TO THE PLANS MUST BE APPROVED BY THE CONSULTING ENGINEER BEFORE CHANGES ARE IMPLEMENTED.
31. WHEN PERFORMING EXCAVATIONS, THE CONTRACTOR SHALL COMPLY WITH THE PROVISIONS OF ORS 217.040 TO 217.050, WHICH INCLUDE REQUIREMENTS THAT THE CONTRACTOR HANDS-DIGS (POTTED) UNDERGROUND FACILITIES AND USE REASONABLE CARE TO AVOID DAMAGING THEM.
32. PLACEMENT OR STORAGE OF SOILS FROM THE EXISTING LINE TRENCHES IS NOT PERMITTED ON HARD SURFACE STREETS WITHIN PUBLIC RIGHT-OF-WAY. SOILS STORED IN OTHER RIGHT-OF-WAY AREAS MUST BE COVERED TO PREVENT EROSION.
33. FORMS OF ADJACENT DISE AND CONFIGURATION TO MEET CONCRETE TOLERANCE REQUIREMENTS SHALL BE USED AROUND COURSES OF CONTIGUOUS MANHOLES.
34. GRANULAR MATERIALS SHALL BE OBTAINED FROM A SOURCE APPROVED BY THE PORT OF BROOKINGS HARBOR. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF THE MATERIAL.

## GRADING NOTES

1. ONE (1) PERMIT IS REQUIRED.
2. UNLESS DIRECTED OTHERWISE, REMOVE, CLEAR AND CRUSHED MATERIAL FROM THE SITE AND DISPOSE AT AN APPROVED LOCATION.
3. PRIOR TO THE START OF CONSTRUCTION, VARIOUS GRADES AT ADJACENT LOCATIONS AND MATCHING OF EXISTING GRADE LOCATIONS.
4. MINIMIZE TRAFFIC ON SOIL AREAS DURING WET WEATHER. IF THE SOIL AREAS ARE EXPOSED DURING WET WEATHER, THE USE OF CRUSHED ROCK PLACED AS EMERGENCY FILL IN THE BOTTOM OF THE EXCAVATIONS MAY BE NECESSARY TO PROTECT THE SUBGRADE. TAKE ALL PRECAUTIONS TO LIMIT SURFACE WATER DAMAGE AND PROTECT THE SITE GRADING AREA FROM EROSION AND WASHOUT.
5. UNLESS OTHERWISE NOTED, THE SLOPES AND TOLERANCES OF MATERIALS FOR USE ON THE PROJECT SHALL BE AT THE EXPENSE OF THE CONTRACTOR. ALL TESTING OF MATERIALS AND MIXTURES SHALL BE PERFORMED BY A CERTIFIED TESTER. RESULTS OF THE TESTS SHALL BE SENT DIRECTLY TO THE PROJECT ENGINEER AS WELL AS THE CONTRACTOR, BY THE LABORATORY, LOCATION AND FREQUENCY OF TESTS SHALL BE DETERMINED BY THE GENERAL CONTRACTOR.
6. ALL CUT AND FILL COVER SHALL BE MAXIMUM OF 3:1 FOR FILL AND MAXIMUM OF 2:1 FOR CUT.
7. USE OF CLATSOP COUNTY WATER SUPPLY FOR DUST CONTROL.

## STORM DRAIN NOTES

1. ALL STORM DRAIN PIPE SHALL MEET THE OREGON STATE PLUMBING SPECIALTY CODE.
2. ALL PIPES SHALL BE PLACED ON STABLE EARTH OR IF IN THE OPINION OF THE PROJECT ENGINEER THE EXISTING FOUNDATION IS UNSATISFACTORY, THEREIT SHALL BE EXCAVATED BELOWGROUND AND BACKFILLED WITH A GRAVEL MATERIAL TO SUPPORT THE PIPE.
3. THE BACKFILL SHALL BE PLACED EQUALLY ON BOTH SIDES OF THE PIPE IN LAYERS WITH A LOOSE AVERAGE DENSITY OF 95% MAXIMUM DEPTH OF 4" INCHES. MATERIALS TO COMPLETE THIS FILL OVER PIPE SHALL BE THE SAME AS DESCRIBED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL MANHOLE, INLET AND CATCH BASIN FRAMES AND GRATES TO GRADE JUST PRIOR TO FINISH.
5. UNLESS OTHERWISE NOTED, ALL STORM DRAIN PIPE SHALL BE CONTINUOUS POLYETHYLENE PIPE. THE MATERIAL SUPPLIED UNDER THIS SPECIFICATION SHALL BE HOMOGENEOUS CORROSION RESISTANT POLYETHYLENE SMOOTH INTERIOR PIPE AND SHALL BE MANUFACTURED IN CONFORMANCE WITH THE LATEST AASHTO SPECIFICATIONS. COUPLERS SHALL COVER NOT LESS THAN ONE FULL CIRCUMFERENCE OF EACH AMERICAN STANDARD SIZE OF PIPE.
6. CULVERT ENDS AT OUTFALLS SHALL BE REVEALED TO MATCH SIDE SLOPES. FIELD CRY OF CULVERT ENDS IS PERMITTED UNDER APPROVED BY THE ENGINEER OR RECORD REPRESENTATIVE. CULVERT DETAILS SHALL BE REPRODUCED WITH A PAD ANCHOR OF 12" DEPTH, WITH A MINIMUM OF 6" FROM UNCHARGE POINT.
7. ALL STEEL PIPES, CURBENTS, TANKS AND OTHER STEEL PARTS OF ANY STORM DRAINAGE SYSTEM SHALL BE GALVANIZED OR HAVE A TREATMENT 1" AESTHETIC COATING ON BOTH ENDS AS SPECIFIED IN THE OOST STANDARD SPECIFICATIONS. ALUMINUM AND CONCRETE PIPES AND STRUCTURES DO NOT REQUIRE A TREATMENT LOCATION.
8. STORM WATER RETENTION/RETENTION FACILITIES, STORM DRAINAGE PIPE AND CATCH BASINS SHALL BE FLUSHED AND CLEANED PRIOR TO CITY ACCEPTANCE.
9. ALL PIPES SHALL HAVE A MINIMUM OF 30° CORNER AT THE TOP OF THE BELL, OR SHALL HAVE MINIMUM COVER PER THE MANUFACTURERS SPECIFICATIONS, WHENEVER IS REQUIRED.
10. CATCH BASIN STATIONS AND OFFSETS ARE MEASURED TO CENTER OF GRATE.
11. 60 FT MAX LINEAR RUN BETWEEN CLEANOUTS, 120' MAX AGGREGATE HORIZONTAL CHANGE IN DIRECTION WITHOUT CLEANOUT.

## SANITARY SEWER NOTES

1. THE SANITARY SEWER SYSTEM IS TO BE OWNED AND MAINTAINED BY THE PORT OF BROOKINGS HARBOR.
2. INSPECTION AND ACCEPTANCE IS TO BE THE RESPONSIBILITY OF THE PORT OF BROOKINGS HARBOR.
3. ALL WORK SHALL CONFORM TO THE LATEST EDITION OF THE AASHTO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AND COR STANDARD SPECIFICATIONS AND DRAWINGS. CLATSOP COUNTY STANDARDS SHALL TAKE PRECEDENCE.
4. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR AND THE PORT OF BROOKINGS HARBOR IS REQUIRED PRIOR TO STARTING WORK.
5. CONTRACTOR SHALL NOTIFY ORS 217.040 TO 217.050 PRIOR TO PERFORMANCE WORK OR MATERIALS TO BE OBTAINED AND MAINTAINED BY THE PORT OF BROOKINGS HARBOR, INCLUDING TAP ON EXISTING SEWER LINE.
6. CATCH BASIN CENTER LINES WILL BE VERIFIED PRIOR TO PERFORMANCE WORK ON THE PORT OF BROOKINGS HARBOR FACILITIES INCLUDING EXISTING SPACE BASIN, MANHOLE PROTECTIVE EQUIPMENT INCLUDING BUT NOT LIMITED TO GAS DETECTION METERS, FULL PROTECTION AND A DEFINED SPACE REMOVE SYSTEM WILL BE REQUIRED.
7. CONTRACTOR IS RESPONSIBLE FOR THE TESTING OF SANITARY SEWER FACILITIES PER OOST SPECIFICATIONS. TESTING OF SEWER FACILITIES IS SUBJECT TO THE PORT OF BROOKINGS HARBOR ACCEPTANCE.
8. CONTRACTOR IS RESPONSIBLE FOR THE MANAGEMENT OF EXISTING SEWER FLOWS DURING CONSTRUCTION. UPON REPAIR, A SEWER PUMP PLAN MUST BE SUBMITTED TO THE PORT OF BROOKINGS HARBOR FOR APPROVAL PRIOR TO PASSING OR BEGINNING EXISTING SEWER.
9. SANITARY SEWER WORK SHALL MEET THE OREGON UTILITY BUILDING SPECIFICATION CODE.
10. NOTIFY ENGINEER IF ANY EXISTING SEWER LINES ARE FOUND. UTILIZATION OF SUCH LINES IS SUBJECT TO COMPLETION OF THE UTILITY INSPECTION, ONE CALL, AND APPROVAL BY LOCAL AUTHORITIES. AMONGST OTHERS, LATERALS NOT UTILIZED PER LOCAL AUTHORITY STANDARDS.
11. 60 FT MAX LINEAR RUN BETWEEN CLEANOUTS, 120' MAX AGGREGATE HORIZONTAL CHANGE IN DIRECTION WITHOUT CLEANOUT.

## WATER NOTES

- ALL WATER NOTES SHALL BE DONE IN ACCORDANCE WITH THE CURRENT REQUIREMENTS OF THE PORT OF BROOKINGS HARBOR STANDARDS. STANDARD SPECIFICATIONS.
1. SERVICE CONNECTIONS ARE TO BE INSTALLED FOR EACH PARCEL, PER CLATSOP COUNTY STANDARDS.
  2. COVER OVER EXISTING MAINS SHALL NOT BE CHANGED WITHOUT WRITTEN AUTHORIZATION OF THE PORT OF BROOKINGS HARBOR.
  3. NEW MAINS ARE TO BE PRESSURE TESTED, CONNECTED AND PROVEN TO BE WATER TIGHT AND PROOF TO PLACING NEW MAINS IN SERVICE BY THE PORT OF BROOKINGS HARBOR. PRESSURE TESTING SHALL NOT BE DONE UNTIL ALL EXCAVATION AND BACKFILL UP TO SUBGRADE HAS BEEN ESTABLISHED.
  4. WITH BACKFILL TO TOP OF WATER MAINS AND FIRE HYDRANT RISERS SHALL BE COMPACTED IN ACCORDANCE WITH CLATSOP COUNTY STANDARD SPECIFICATIONS FOR TRENCH EXCAVATION AND BACKFILL, OR BACKFILL MATERIAL AND COMPACTION SHALL MEET THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
  5. WATER MAINS AND FIRE HYDRANT ARE TO BE INSTALLED WITH REFERENCE ALIGNMENT AND GRADE STATUS AND ONLY UPON NOTIFICATION OF CLATSOP COUNTY INSPECTOR.
  6. WATER MAINS ARE TO BE INSTALLED AFTER SEWERS.
  7. WHERE NEARBY MAINS ARE TO BE INSTALLED, REMOVE CURBS AND GUTTERS. IN THE EVENT A WATER MAIN IS INSTALLED LARGER THAN 100" IN DIAMETER, ONE (1) INCH MORE THAN THREE (3) FEET OF COVER. THE CONTRACTOR WILL BE REQUIRED TO INSTALL AN OFFSET MANHOLE TO STARGARD THE LINE AS TO THE POINT OF THE FIRE HYDRANT.
  8. STUBS SERVICE RISERS SHALL BE INSTALLED PRIOR TO CURBS AND GUTTERS AND AFTER PUBLIC UTILITY PARASITIC ARE GRADED TO CURB LEVEL.
  9. EXISTING MAINS (UNDERGROUND) SHALL BE AVAILABLE AT SITE OF THE CONSTRUCTION AT ALL TIMES DURING CONSTRUCTION UNLESS OTHERWISE NOTED.
  10. SEPARATION OF WATER MAINS, INCLUDING SERVICE LINES AND SANITARY SEWER, SHALL BE IN ACCORDANCE WITH CURRENT OREGON STATE HEALTH DEPARTMENT REGULATIONS. THE 8" PARASITIC EXCEPT IN ALL CASES REMAINS PARALLEL WITH EACH OTHER. THERE SHALL BE A 10" FOOT SEPARATION WATER LINE TO CENTER LINE. PER CLATSOP COUNTY STANDARDS (STANDARD DETAILS 402.3).
  11. JOINTS AND JOINTS ARE TO BE PROTECTED BY THE PORT OF BROOKINGS HARBOR. JOINTS OF ANY MAIN SHALL BE WITHIN FIVE (5) FEET (HORIZONTAL) OF ANY WATER FACILITY WHETHER THAT WATER FACILITY IS ABOVE OR BELOW GROUND. THIS DISTANCE SHALL BE TEN (10) FEET (HORIZONTAL) WHEN WATER AND SANITARY SEWER FACILITIES ARE CONJOINED.
  12. NO BELOWGROUND UTILITY LINES OR OTHER SERVICE OF ANY KIND SHALL BE WITHIN FIVE (5) FEET (HORIZONTAL) OF ANY WATER FACILITY WHEN INSTALLED IN ALLIES TO THESE FACILITIES.
  13. NO BELOWGROUND UTILITY LINES OR OTHER SERVICE OF ANY KIND SHALL BE WITHIN FIVE (5) INCHES (VERTICAL) OF ANY WATER FACILITY WHEN INSTALLED IN ALLIES TO THESE FACILITIES.
  14. SANITARY SEWER FACILITIES ARE CONSIDERED.
  15. REPAIRED OR IMPROVED WATER MAINS WILL NOT BE ALLOWED WITHIN 30 FEET OF EXISTING WATER FACILITIES AND ONLY WHEN THE PORT OF BROOKINGS HARBOR AND THROUGH A PERMIT PROCESS WITH THE DEPARTMENT OF OTHER WATER MAINS.
  16. THE CLATSOP COUNTY REQUIRES "POLY PIPE" TO BE USED ON ALL NEWLY LAYED WATER LINES.
  17. ALL NEW WATER MAINS SHALL BE INSTALLED BY A CLATSOP COUNTY PRE-QUALIFIED INSTALLER.
  18. ONLY STATE OF OREGON APPROVED BACKFLOW PREVENTION ASSEMBLIES SHALL BE INSTALLED.

## APPLICABLE CODES

ALL WORK SHALL BE IN CONFORMANCE WITH ALL FEDERAL, STATE, AND CITY CODES. SPECIFICATIONS AND STANDARDS SHALL MEAN, AND ARE REFERRED TO, THE LATEST EDITION, AMENDMENT OR REVISION OF SUCH REFERENCED STANDARDS IN EFFECT AS OF THE DATE OF THE CONTRACT DOCUMENTS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

OREGON STANDARD DRAWINGS (2007)

CLATSOP COUNTY ADOPTED STANDARDS DETAILS AND SPECIFICATIONS

ORIG OREGON PLUMBING SPECIALTY CODE, LATEST EDITION

ORIG OREGON FIRE CODE, LATEST EDITION

AWA: NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) LIFE SAFETY CODE, LATEST EDITION

## PAVEMENT MARKING NOTES

1. ALL STRIPES AND SIGNS SHALL BE PER MUTCD STANDARDS OR AS DIRECTED BY THE LOCAL AUTHORITY.
1. ALL STRIPES AND SIGNS SHALL BE PER MUTCD CHAPTER 6B OF THE MUTCD OR PER LOCAL AUTHORITY STANDARDS.
2. ALL STRIPES SHALL MEET ADA REQUIREMENTS.

## ADA NOTES

1. ALL ADA ACCESSIBLE SURFACES SHALL BE INSTALLED PER THE CURRENT ADA REQUIREMENTS AND PUBLIC BUILDING ACT OF 1990 ACCESSIBILITY GUIDELINES (PREGAV).
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THAT THE ACCESSIBLE PATH OF TRAVEL COMPLIES WITH AN ACTUAL DISABILITY ACT AND ALL LOCAL CODES.
3. THE ACCESSIBLE PATH OF TRAVEL AS INDICATED ON PLANS IS A BARRIER FREE ACCESS ROUTE WITHOUT ANY SURFACE CHANGES INCLUDING BUT NOT LIMITED TO: MAXIMUM OF 1/4" VERTICAL CURBSTEP OR VERTICAL CURBSTEP EXCEEDING 1/4" MAX AND AT LEAST 6" WIDE. SURFACE IS SLIP RESISTANT, STABLE, FIRM, AND SMOOTH. CROSS SLOPE DOES NOT EXCEED 2% AND SLOPE IN THE DIRECTION OF TRAVEL IS LESS THAN 8% UNLESS OTHERWISE NOTED.

## INSPECTION AND TESTING NOTES

1. CONTRACTOR IS RESPONSIBLE FOR COVERING ALL TESTING, INSPECTIONS, AND SPECIAL INSPECTIONS AS REQUIRED BY PROJECT ENGINEER, CURRENT BUILDING CODES, OR APPLICABLE LOCAL AUTHORITY. ALL TESTING MUST BE COMPLETED AND APPROVED PRIOR TO COMMENCING WORK. ADDITIONAL OR FREQUENT TESTS MAY BE REQUIRED BY AGENCY, QUALIFIED INSPECTOR OR ENGINEER.
2. TESTING MUST BE PERFORMED BY AN APPROVED INDEPENDENT TESTING LABORATORY RETAINED BY CONTRACTOR.
3. IN ADDITION TO PLACE DENSITY TESTING, THE SUBGRADE AND BASE ROCK SHALL BE PROOF-ROLLERS WITH A CALIBER DUMP TRUCK OR HEAVY NON-METALLIC ROLLER. TESTS SHALL BE REPEATED AND THE COMPACTOR OR ROLLER REPLACED WITH APPROVED IMPROVED STRUCTURAL FILL IF THEY DO NOT DEMONSTRATE A FIRM, UNYIELDING CONDITION. AIRSECCOR PROFILES SHALL TAKE PLACE LESS THAN 24 HOURS PRIOR TO PAVING AND SHALL BE WETTED BY THE ENGINEER OR QUALIFIED AGENCY.
4. THE APPROVED INDEPENDENT LABORATORY SHALL PROVIDE CERTIFICATION STAMPED BY AN ENGINEER LICENSED IN THE STATE OF OREGON THAT THE SUB-GRADE IS PREPARED AND ALL UNDERSIERS FIELDS ARE PLACED IN ACCORDANCE WITH THE CONTRACT DRAWINGS AND DOCUMENTS.
5. PROVIDE ENGINEER WITH SPOT ELEVATION VERIFICATION FOR SUB-GRADE AND TOP OF AGGREGATE PRIOR TO PLACING CONCRETE, ASPHALT, AND/OR STRUCTURES (WHEN INCLUDED IN THE PROJECT).


EMC  
Engineering & Construction  
1234 Main Street, Astoria, OR 97103  
Phone: 503-325-1234  
Fax: 503-325-5678  
www.emc-engineering.com

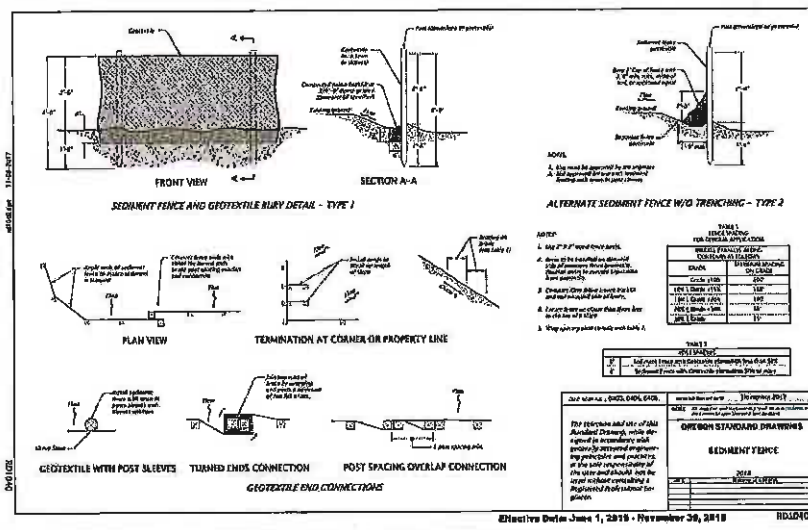
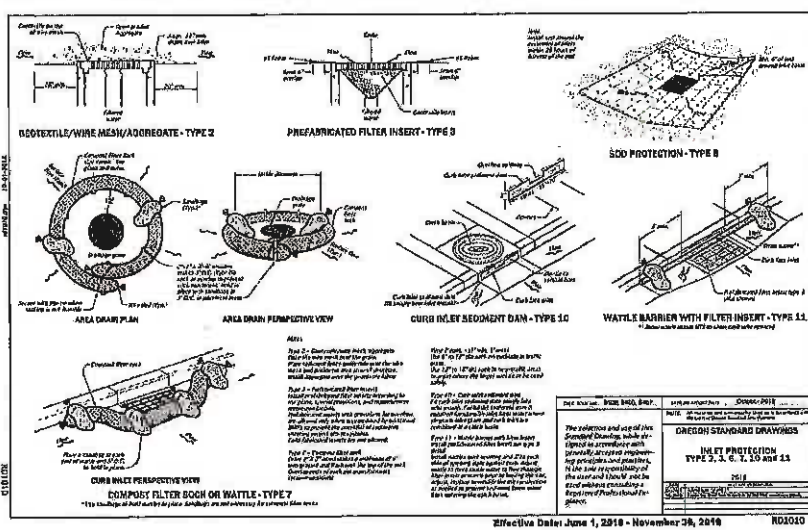
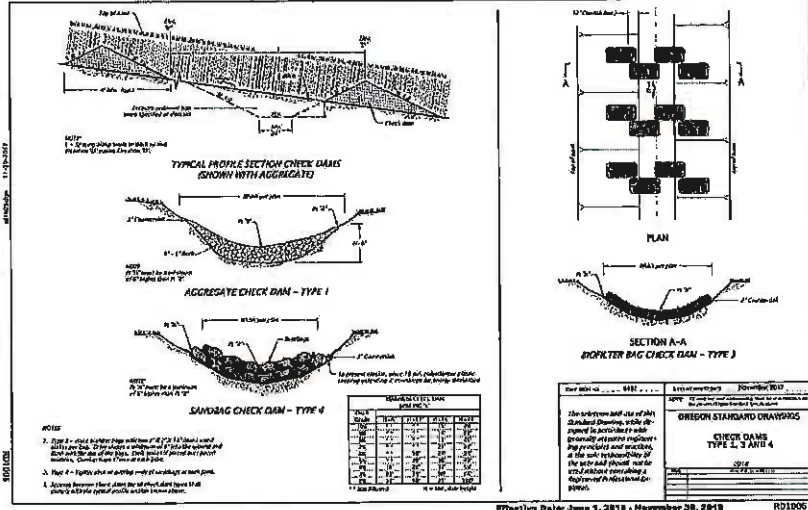
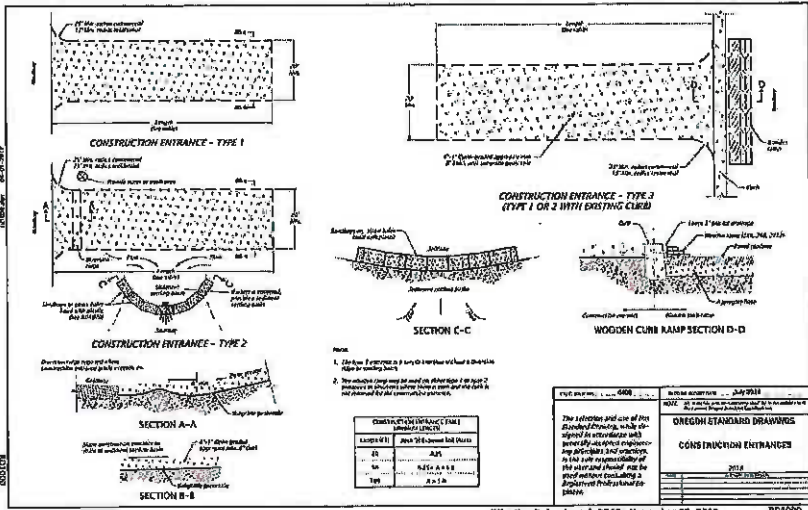


PORT OF BROOKINGS HARBOR  
1234 LOWER HARBOR ROAD, BROOKINGS, OR 97415  
KITE FIELD RV PARK

DRAWN BY: TLM  
DATE: 11/01/21  
JOB NO: 20-XXX  
**C4.1**  
GENERAL NOTES

34





**EMC**  
Engineering & Construction Services, LLC

**PORT OF BROOKINGS HARBOR**  
1835 LOWER HARBOR ROAD, BROOKINGS, OR 97415

**KITE FIELD RV PARK**

DRAWN BY: TAM  
DATE: 17/01/21  
JOB NO: 20-XXX  
**C5.0**  
ECS STANDARD DETAILS

345



## INFORMATION ITEM – A

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**DATE:** November 17, 2021  
**RE:** Harbor Water District – Wastewater Treatment Plant Information  
**TO:** Honorable Board President and District Board Members  
**ISSUED BY:** Gary Dehlinger, Port Manager

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### OVERVIEW

- Port received comments from Dan Fraser, Commissioner at Harbor Water District at the last regular meeting on October 20, 2021.
- Port staff provided a response to the comments and reviewed by port legal.

### DOCUMENTS

- Port response to Harbor Water District comments, 13 pages

Response to Dan Fraser / Harbor Water District letter to Port of Brookings Harbor wastewater treatment plant.

Do you have the authority to speak on the behalf of Harbor Water District on this matter? If no, this conversation ends.

**Dan Fraser Communication with Port:**

- Dan Fraser email dated September 21, 2021, from his personal email for a public comment at Port Regular Meeting did not express comments were from Harbor Water District.
- Dan Fraser email dated October 15, 2021, from his personal email for agenda item to be placed on Port Regular Meeting agenda did not express comments were from Harbor Water District.
- Dan Fraser comments on October 20, 2021, Port Regular Meeting during the public comment period was the first time Harbor Water District comments were expressed to the Port.

**Port Wastewater Treatment Plant Planning/Meetings:**

1. May 28, 2020, Workshop Commission Meeting - Strategic Business Plan 5-Year Mid-Point update for first public comments period on the plan.
2. July 9, 2020, Workshop Commission Meeting - Strategic Business Plan 5-Year Mid-Point update for second public comments period on the plan.
3. July 21, 2020, Regular Commissioner Meeting - Strategic Business Plan 5-Year Mid-Point update approval.
4. Congressman DeFazio visit to the Port August 19, 2020, to see the potential site of the wastewater treatment plant and discuss funding opportunities.
5. October 20, 2020, Regular Commission Meeting – Business Oregon Strategic Business Plan 5-Year Mid-Point update approval.
6. April 6, 2021, Special Commission Meeting resolution supporting the wastewater treatment plant funding opportunity from Congressman DeFazio.
7. April 29, 2021, Regular Commission Meeting – DeFazio funding application.
8. July 15, 2021, Workshop Commission Meeting – Wastewater Treatment Plant funding update.
9. August 17, 2021, Regular Commission Meeting – DeFazio Port visit regarding wastewater treatment plant funding.
10. August 17, 2021, Regular Commission Meeting – Wastewater Treatment Plant funding update.
11. Congressman DeFazio virtual visit to the Port August 25, 2021, discussion on wastewater treatment plant funding being secured.
12. September 21, 2021, Regular Commission Meeting – Wastewater Treatment Plant general information with Port engineer.

**BC Fisheries New Processing Plant:**

- Prior Port administrations were working to bring back a seafood processing plant since Eureka Fisheries left in 2001.
- The current processing plant planning began prior to 2015 with a private business, the Port of Brookings Harbor, and the State of Oregon joining together to make it happen.
- State of Oregon approved appropriating \$1.5 million for the construction of a new receiving dock, in conjunction with, the building of a processing plant from private funding in 2015-2016. Legislators of Oregon supported the processing plant for economic development and creating jobs.

- Private owner, Port of Brookings Harbor and Oregon Department of Environmental Quality (ODEQ) had meetings regarding the discharge waste from the processing plant. ODEQ allowed the processing plant to operate under a temporary permit to conduct testing of the waste until further data is obtained.
- Processing plant grand opening was in 2016 with some Oregon legislators being present.
- Processing plant wastewater testing is not meeting ODEQ standards causing corrective actions to be taken by the private business. After making modifications to the discharge system, the discharge continues to exceed the limits. The Port has also received many complaints from moorage holders of slime in the harbor and on their boats.
- Because the combined support to bring back a processing plant and creating jobs, the Port of Brookings Harbor began seeking funding solutions to improve the wastewater from the processing plant.
- Congressman DeFazio earmark for \$3.5 million for a wastewater treatment would ensure the retention of the processing plant and jobs that were created and improving the environment.

**Port Wastewater Treatment Plant:**

- A wastewater treatment plant at the Port would retain and ensure the processing plant lease for the next 60 years. The processing plant supports many commercial fishing boats and crews at the Port which also supports the local economy.
- This is a working Port that hosts many commercial and recreational businesses. Without the proper infrastructure, a working Port will not be able to meet the needs of the businesses.
- A wastewater treatment plant would clean up the environment and reduce complaints of damaged boats.
- A wastewater treatment plant would diversify the Port's revenue sources and provide for future economic expansion.

**Allegations made in the letter presented at the Port Regular Meeting held October 20, 2021:**

- **Allegation #1.** The Port has not consulted Harbor Water District regarding the planned wastewater treatment plant.

*Response. Port's planning is currently in the conceptual stage of type and size of a wastewater treatment plant. Conversations of this plant sparked the interest of Congressman DeFazio over a year ago. Congressman DeFazio decided to support the plan by earmarking federal funding. When more information on the wastewater treatment plant is available, including secured funding, conversations with local districts and governments would occur that would be directly involved.*

- **Allegation #2.** The Port has done no research on the withdrawal of water from Chetco River.

*Response. There would be no need to research withdrawal of water from Chetco River because the wastewater treatment plant would not be using Harbor Water District PUD water for treatment of wastewater. The favored wastewater treatment plant being reviewed uses NO FRESH WATER in its treatment process. Any type of wastewater treatment plant would use little to no fresh (clean) water in its process to treat wastewater.*

- **Allegation #3.** August 17, 2021, page 116 of Port Commission Packet states the plant will have capacity of 300,000 gallons of wastewater treatment per day or 9,000,000 gallons per month.

*Response.* Correct, this plant is currently being designed to handle Pacific Seafood effluent (fish processing waste - wastewater) that is generating between 220,000 to 250,000 gallons of wastewater per day. Having the capacity to treat wastewater between 300,000 to 500,000 gallons per day provides a buffer for any usual usage or additional processing expansion.

- **Allegation #4.** Since 2016, when this processing plant came on line and began processing here, the Harbor Water District, water users, have had to deal with salt water getting into their drinking water, because of high tides and low flows of the Chetco River.

*Response.* There has been no data provided to the Port indicating, since 2016 when the processing plant came online, had any direct influence affecting the communities water supply. On the contrary, there are engineering studies provided to City of Brookings by PACE and Civil West Engineering Services where saltwater intrusion from high tidal events in the 1980's that caused the abandonment of the first intake and constructed a new intake further upriver. Saltwater intrusion been an issue for over 30 years prior to the opening of the fish processing plant. The claim of the fish processing plant causing saltwater issue to Harbor Water District community is unfounded and misplaced without providing any supporting facts.

- **Allegation #5.** Can Harbor Water People's Utility District supply 1.5 million plus gallons per day?

*Response.* The Port staff or engineer never said in any discussions or meetings with the Port Board of Commissioners that this plant would consume 1.5 million gallons of fresh CLEAN water per day from Harbor Water District PUD. This wastewater treatment plant could potentially expand to handle up to 1.5 million gallons of WASTEWATER (water that's been used commercially or community) per day. Harbor Water District PUD commission has made incorrect assumptions about the fresh water needs of the plant.

- **Allegation #6.** Does this Board have any idea how much water that Pacific Seafood has used over the past three months?

*Response.* Harbor Water District provides water service to Pacific Seafood, the Port does not have any say on how much water is used for their process. The Port knows approximately how much effluent (wastewater) is generated per day. Which is why the initial wastewater treatment plant design is between 300,000 and 500,000 gallons per day.

- **Allegation #7.** This Port has nothing in writing from Pacific Seafood guaranteeing that they will continue to process any product here in the future if the treatment plant is built.

*Response.* The Port has a lease with Pacific Seafood that is contractually binding for 30 years with an option to renew for another 30 years. This plant is a state-of-the-art shrimp and crab processing plant that will provide food worldwide. Pacific Seafood is one of largest fish companies in the western hemisphere. It is very unlikely Pacific Seafood would abandon this plant and the Port forgiving this contract agreement. Your assessment of this situation does not take into account all of the facts (such as the 30-60 year lease).

- **Allegation #8.** Where would the Port increase commercial fish processing, increasing truck traffic and creating smell from the discharge.

*Response. The Port does have space for future commercial expansion. Increased trucking on Port and County roads will not impact Harbor Water District PUD services. A wastewater treatment plant would reduce discharge odor concern. Regardless, discharge odor will not impact services of the Harbor Water District.*

- **Allegation #9.** We the current Board (Harbor Water District), are not opposed to growth. What we do oppose is un-responsible growth. You are proposing to create more demands on our system, from the pumps, water transmission lines, storage tanks, chlorinator and electrical systems, etc., without so much as a courtesy head up, which is so typical of past practices of this port, which has been/is, “we can do what we want”, the green building being the most glaring example.

*Response. The past actions of Port of Brookings Harbor do not suggest the current staff or Board of Commissioners are following in the footsteps of previous administrations. The current administration prides itself of communicating with the public, other special districts, and local and federal governments. Mr. Fraser's actions and comments towards our staff and Board are largely unfounded and uninformed. Not once did Mr. Fraser ask the Port Manager for clarification (as a commissioner of Harbor Water District) until the night of our Board meeting on October 20, 2021. Not once did any Harbor Water District representative contact the Port Manager to discuss any concerns regarding the Port's plans for a wastewater treatment plant.. Communication is the responsibility of both entities. The Port has not engaged Harbor Water because there is no foreseen impact to Harbor Water District under this circumstance. This wastewater treatment plant is good for the community, ensuring a clean environment, and providing necessary infrastructure for future generations for years to come.*

#### **Attachments**

Exhibit A – Dan Fraser Letter to the Port dated 10/20/2021

Exhibit B – Excerpts from City of Brookings, Water Master Plan Update and Redundant Water Supply Plan

Public Comments at POBH for 10/20/2021

Thank you for the opportunity to speak you today. I request to be allotted additional time today as I'm not only speaking as a member of the community, but as the President of the Harbor Water, People's Utility District, about the port's proposed<sup>water</sup> water treatment plant. So may I have extra time to make this presentation?

The one question I have for this Board, is why was HARBOR WATER PUD, not consulted or informed by this board, or the port management of the proposed water treatment plant? As a developer, you have the responsibility contact the agencies, whether city, county, state or a special district, whose services you will be using to see if they can meet your proposed needs, yet no one from this port has spoken to Harbor Water, to see if we can meet the proposed needs of this expansion. The only reason the HARBOR WATER PUD BOARD knows, is because I found it in the port's meeting packet, while reviewing the September minutes about the proposed size of said treatment plant and being on the Harbor Water Commissioners Board, informed them of your proposed water treatment plant.

Currently, this Commission, based on the Port management's information, a green light to secure funding for a waste water treatment plant. You have been lead to believe that is not only good for POBH, but the community as well. While, on the surface this sounds and may look like a good thing, I and my fellow board members of the HARBOR WATER PEOPLE'S UTILITY DISTRICT, have to disagree. Little to



no research has been done as to whether the Chetco River can sustain the withdrawal of water that was presented by the port's manager, Gary Dehlinger, and engineer, Jack Akin, of EMC Engineering.

In the August 17, 2021, page 116, of your Commissioner's packet it states that this plant will have the capacity of three hundred thousand (300,000) gallons of waste water treatment per day. Yet when you read the September 21, 2021 packet, page 133, it states the initial system design is three hundred thousand to five hundred thousand gallons (300,000 to 500,000 gallons daily equals 9,000,000 to 15,000,000 gallons of water a month) with the possibility of expansion to over one point five (1.5) millions gallons per day equating to over 45,000,000 gallons per month. This is happening when the Chetco River is at its lowest flow, during the summer months. Whether the Chetco River, the source of both Brookings' and Harbor's drinking water can and will handle such a drawdown of water and remain a viable river, without the issues of the San Joaquin/Sacramento River Delta, (i.e. the salt water encroaching further up the river channel, to compensate for the lack of fresh water to push it out) would be something that only time will tell. Personally, I don't think this river or our community, can afford to test whether the additional drawdown of fresh water will cause higher salt water intrusion further up the river.

Since 2016, when this processing plant came on line and began processing here, the Harbor Water District, water users, have had to deal with salt water getting into their drinking water, because of the high tides and low flows of the Chetco River. This past Tuesday September 18, 2021, I reviewed the original building plans, from 1982, which show the river approximately four hundred feet (400) from the southern embankment along the south bank river road. Over the past

fifty (50) years, it has migrated south approximately three hundred and thirty (330) feet, taking with it river rock and river bank. Those plans show the collector seventy (70) feet from the southern embankment. We at Harbor Water have, an engineering firm working to address the salt water issue, that has plagued the Water District since the BC FISHERIES/PACIFIC SEAFOODS processing plant has started processing product. Loss of river rock, by the engineering firm, currently estimated to be over fifty percent (50%) of rock from the top of the six laterals that radiate out seventy (70) feet out from our "Rainey Collector" on the south side of the river. Not to mention the river bank around the collector. Hopefully, by the next in water work period, summer of 2022, we will have the engineering completed and permits in place to get the work started, as the river has started to erode the bank around the collector. The engineers looking at that issue of, the integrity of the collector, this past week to assess whether the structural integrity of the collector has been compromised. We are awaiting those reports.

So the next issue is; can HARBOR WATER PEOPLES UTILITY DISTRICT supply that 1.5 million plus gallons per day, in addition to the current water usage, for the proposed treatment plant? **NO!** The infrastructure is not in place to supply the increased demands for water. Harbor Water PUD would have to double pump size, water transmission lines will need to double, upgrade electricity for the extra water usage (approximately \$30K per pump times 4 in electrical upgrades alone and that is not including the cost of the pump motors), tank storage capacity, upgrade chlorinator, just to name a few of the many items needed for this Water Treatment plant you are proposing.

What effect will it have on other wells that are outside of the Water District's boundaries, (i.e. will this extra draw of water out of the

Chetco River lower the surrounding water table causing well users to have to dig their wells deeper to maintain water for their households?) That is a question that we currently cannot answer at this point.

If Harbor Water can't supply the water, could you get the City of Brookings to cross the river to supply the needed water for your facility or the future growth of the port? **No.** According to Anthony Baron, City of Brookings Public Works and Development Services Director. The City of Brookings cannot come across the Chetco River as long as Harbor Water and Harbor Sanitation districts are in place.

Does this board have any idea how much water that Pacific Seafood has used over the past three months? I'm glad you are sitting down, as the number is staggering. For the last four months, they have **averaged seven million forty six thousand one hundred gallons (7,046,100) per month, for a grand total of twenty eight million one hundred eighty four thousand four hundred (28,184,400) gallons for the months of June, July, August, and September. A daily average of two hundred thirty four thousand eight hundred seventy (234,870) gallons.** Mind you that's a daily average over those four months. Speaking to the Water shop staff, who have been monitoring the daily usage, that plant, has at times, used almost four hundred thousand (400,000) gallons a day. The way it currently stands, **this processing facility is using approximately one quarter of the total water Harbor Water pumps from the Chetco River. That's twenty five percent of our current daily intake!** According to Water district's shop, in the past two months, we have had two pumps log thirty four hours of run time in a single twenty four hour time frame, so that our tanks could be at or near capacity. Last summer, 2020, Harbor Water, lost two of our four pumps and was running on the remaining two pumps. If we had lost

one of those pumps, we was going to shut off water to Pacific Seafood, and we had informed them of such, as we was not going to jeopardize the district as a whole for one user. To get those two pumps repaired, we had to wait several months for a company to come in, tear down those two pumps, build new shafting and bearings, and secure the remaining parts needed to rebuild those two pumps. That cost the District in excess of one hundred and fifty thousand dollars (\$150,000).

When the previous owner, built that processing plant, he furnished documents, to the port, that this processing plant would be reclaiming approximately 30% of the water it used. To date, according to the current plant manager, no water is being reclaimed, instead it is dumped into the basin with all the effluent particles it contains.

So, let me suggest this, if this Port is so determined to build this waste treatment plant, do it the responsible way. The effluent water that will be treated and cleaned, can it be reused by the plants you are seeking to entice here, by recycling it? This then lowers the amount of water being pumped out of the Chetco River and smaller amounts supplied by Harbor Water on a daily basis, preserving the flow of the Chetco River, supplementing for the loss during the cooking process.

This proposed waste water treatment plant, currently, only benefits one user, Pacific Seafoods, which according to an article published two weeks ago in our local paper, states that Pacific Seafoods received \$16.2 million from the United States Dept. of Agriculture. This port has nothing in writing from Pacific Seafoods they will continue to process any product here in the future, if you build this treatment plant. All it takes is a down turn in the markets, size or lack of production from the fishing fleet, and they could shut the doors, leaving this community

with empty buildings and the bills to pay.

The comments from the Port's September Commissioners meeting was that this is good for the port, the community and the local fleet as it will bring jobs into our community, possible processors for the fleet, because, we would or will have the infrastructure in place to handle the upcoming DEQ effluent water requirements. That all sounds nice, but then the next question is, where are you going to put these processors? The port has limited land and at some point you're going to have to send away the commercial fleets gear storage to accommodate these processing plants, if they come. The increase of truck traffic from trucking a finished product out of the area, will now impact the traffic around the port, not only in the summer, when we have the greatest influx of visitors, but to those of our community that come to down to enjoy Sporthaven beach throughout the entire year. As for the smell this plant my emit, well hopefully it will be better than the current smell we experience during the summer when the low flows of the Chetco River are not enough to carry out to sea, the discharge from this plant.

In parting, let me state this, WE the CURRENT BOARD, ARE NOT OPPOSED TO GROWTH. What we do oppose is un- responsible growth. You are proposing to create more demands on our system, from the pumps, water transmission lines, storage tanks, chlorinator and electrical systems, etc., without so much as a courtesy head up, which is so typical of past practice of this port, which has been/is, "we can do what we want", the green building being the most glaring example.

From this point on, let our two districts work together on this, for the betterment and benefit of our community. We all want to see this area

grow, our children enjoy, in the future, what we have had today. By working together that can happen, but as we have heard since our childhood, we have to work together as a team, for this to succeed.

CITY OF BROOKINGS  
 WATER MASTER PLAN UPDATE  
 APRIL 2014 – Final

Prepared By: PACE

### 3.3.2 Historic Sources

Ferry Creek and Ferry Creek Reservoir are the City's oldest source. The reservoir was constructed in 1913 with a volume of 9 million gallons and expanded in 1945 to 29 million gallons. It was utilized for municipal water supply into the 1970's. The reservoir still exists and receives some maintenance by City staff.

Joe Hall Creek was developed as a source to provide additional water to the Ferry Creek reservoir via a flume. Ransom Creek is another historic source. Joe Hall Creek and Ferry Creek are tributary to the Chetco River; Ransom Creek is tributary to the Pacific Ocean.

Use of the City's old Chetco Intake at "Tide Rock" was discontinued in the 1980's because of reports or concerns with salt water intrusion during high tidal events. The intake structure is still in place and consists of a 7.0 foot diameter steel caisson with perforations on the lower portion. It is located near the water's edge and based on an old sketch extends 22 feet below the "water surface" and 30 feet above the "water surface." "Water surface" is 6.96 feet in the sketch.

PACE | CITY OF BROOKINGS | WATER MASTER PLAN UPDATE 3-3

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Redundant Water Supply Plan  
 City of Brookings  
 Curry County, Oregon  
 AUGUST 2015

Prepared By: Civil West Engineering Services, Inc.

### 1.2 Existing Water System

The City of Brookings owns and operates a water system that provides water service to approximately 7,467 water system users within the community's UGB north of the Chetco River. The community's water system can trace its roots back to a privately owned system that was first established in the early 1900's. At that time the system consisted of the Ferry Creek reservoir and a limited distribution system. In the 1970's the City of Brookings acquired the private system and began major improvements. Some of the first significant improvements included the construction of a river intake on the Chetco River. Due to concerns with saltwater intrusion at the intake site, the first intake the City constructed was abandoned and a new intake was constructed further up river. The newer intake that was constructed is called the Ranney Collector and is still the intake that the city uses for its water system today. This intake station houses three vertical turbine pumps, which are employed via simplex operation (one pump at a time) to produce approximately 2.0 million gallons per day (MGD).

During the 1970's the City constructed a rapid sand filtration water treatment plant with a treatment capacity of 1.5 MGD. It was then upgraded in 1988 to be able to treat 2.0 MGD to match the capacity of the Ranney Collector. In addition to the water intake and treatment facilities, the City's water system includes 9 booster pumps stations and 11 storage tanks which together achieve a treated water storage

capacity of approximately 3.6 million gallons. The distribution system delivers water to 3,354 water meters (2012 meter count) via a network of water mains that range in size from 2-inches to 16-inch diameter pipe. Although the City has worked hard to update the distribution system, the system still has older lines constructed of steel, cast iron, and asbestos cement (AC) in service today.

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## INFORMATION ITEM – B

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**DATE:** November 17, 2021  
**RE:** Request For Qualifications (RFQ) for General Counsel Services  
**TO:** Honorable Board President and District Board Members  
**ISSUED BY:** Gary Dehlinger, Port Manager

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### OVERVIEW

- Port received resignation letter October 25, 2021, from Martha D. Rice, Port General Counsel, providing the 60-day notice for termination of services. Services will end December 25, 2021.
- With time being of the essence, Martha and I drafted up a RFQ for General Counsel Services. The deadline to submit a proposal is November 30, 2021 at 2:00pm.
- Public notices were placed in the Daily Journey of Commerce and Curry Coastal Pilot newspapers for the entire month. RFQ is also posted on the Port website.
- A Workshop will be scheduled to review the proposals and draft contract after the deadline. If any interviews are necessary will be scheduled. The Board would award and approve the contract for the new general counsel service at the December 15, 2021 regular commissioner meeting.

### DOCUMENTS

- Martha D. Rice Resignation Letter, 1 page
- RFQ for General Counsel Services, 4 pages
- Public Notice Ads, 1 page

# BLACK & RICE LLP

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rblack@attyblack.com

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710 H Street  
Crescent City, CA 95531

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mrice@attyblack.com  
Andre L. Carpenter, Office Mgr  
acarpenter@attyblack.com

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October 25, 2021

Port of Brookings Harbor  
PO Box 848  
16330 Lower Harbor Rd.  
Brookings, OR 97415

*Dear Port Manager Gary Dehlinger, Harbor Master Travis Webster, Commission President Richard Heap and Commissioners Joe Speir, Ken Range, Sharon Hartung and Larry Jonas:*

It has been my distinct honor and pleasure to work for the Port of Brookings Harbor as its general legal counsel over the past 3 ½ years. When I was first appointed to this position, the Port was in rough place. There were various lawsuits, resignations, recalls, and even an Oregon DOJ investigation. Through the leadership of a new commission, including Richard, Ken and Joe, and more recently Sharon and Larry, the Port is in a completely different position today. There are no pending lawsuits, the Green Building has been dealt with, the storm drainage issues are being addressed, the Righetti property boundary issues have been resolved, the RV Park is on the verge of a remodel, and the old Sporthaven restaurant building now houses Zola's on the Water.

Gary and Travis are dedicated, competent leaders that have been the driving the force behind the many successes of the Port over the last few years. The Commission has also been supportive and involved throughout, even during the pandemic. I have no doubt that the Port will continue with its positive, forward movement.

When I applied for and accepted this position nearly 4 years ago, I did not know what the future held. Due to several considerations, I have decided it is time for a change in my career path. I will be applying for an in-house position with the City of Crescent City, meaning that I would be the full-time staff attorney for the City. If selected, I anticipate that this position would begin with the new year (January 2022). Therefore, it is necessary that I notify the Port that my legal services under our current agreement will terminate December 25, 2021.

Thank you for trusting me as your legal advisor and I wish you all much success in the future.

Sincerely,



Martha D. Rice



## Port of Brookings Harbor

16330 Lower Harbor Road / PO Box 848  
Brookings, Oregon 97415  
Phone (541) 469-2218  
Fax (541) 359-3999  
www.portofbrookingsharbor.com

## Board of Commissioners

Richard Heap, President  
Joseph Speirs, Vice-President  
Sharon Hartung, Secretary/Treasurer  
Kenneth Range  
Larry Jonas

### GENERAL COUNSEL SERVICES

### REQUEST FOR QUALIFICATIONS

The Port of Brookings Harbor (Port District) is seeking a law firm or individual attorney to provide General Counsel Services on a contract basis. The selected law firm will be expected to provide a wide range of services to the Port. Law firms and attorneys are invited to submit qualifications and proposals for the provision of these services. In order to be considered, proposals must address each of the concerns requested in this document, including rates and fees.

The General Counsel is selected by and serves at the pleasure of the Port District Board of Commissioners. The General Counsel works closely with the Board President, Port Commissioners, and Port Management.

#### DEADLINE FOR SUBMISSION

All proposals must be received by mail or email no later than 2:00 pm on Tuesday, November 30, 2021.

#### INTRODUCTION

The Port District of Brookings Harbor covers an area of 400 square miles reaching from the mouth of the Chetco River to the Oregon-California border, north to the drainage of the Pistol River, and east to the Curry-Josephine County line. The Port District is governed by a five-member commission elected at-large from the district, which has a population of approximately 16,000 people. The five-member Port Commission is responsible for all the activities of the Port and the management of public assets. Commissioners are elected at large from the district residents and serve without compensation for a term of four years. There are three official positions within the Commission: President, Vice President and Treasurer/Secretary. These positions are filled by election, within the Commission.

The Port District is a member of Special District Association of Oregon (SDAO), a joint powers agency with numerous other Districts throughout the State. As a member, defense counsel for most tort and worker's compensation claims is assigned to a third-party administrator, rather than handled by the General Counsel.

#### MINIMUM QUALIFICATIONS

A qualified candidate must possess a Juris Doctorate from an ABA-accredited law school, a license to practice law in the State of Oregon, and be a member in good standing with the Oregon State Bar. Experience with Oregon municipalities and knowledge of State laws governing special districts, public employment law, public contract law, landlord/tenant law, is required. Experience and knowledge in the area of maritime law is strongly preferred.

## SCOPE OF SERVICES/ DESCRIPTION OF RESPONSIBILITIES

The General Counsel will be required to conduct legal research, provide legal opinions, serve on special projects, represent the Port District as its attorney of record, and supervise or coordinate with outside counsel as needed. The Port District requests one attorney is designated as the point of contact or lead attorney. Accessibility to and a timely response from the attorney is essential to the position.

General duties of the General Counsel include, but are not limited to:

- (1) having charge of all litigation in which the Port District is a party, unless assigned to Special Counsel;
- (2) representing the Port District in all legal matters and proceedings in which the Port District is a party or interested, or in which any of its officers are parties in their official capacity;
- (3) advising the Board of Commissioners or any committee or member thereof, and the Port Manager/CEO as to all legal questions affecting the Port District's interest;
- (4) approving all ordinances, contracts, deeds, bonds and any other documents to be signed in the name of, or made to or with, the Port District; and
- (5) advising the Port District concerning all latent powers, land use issues, and planning and zoning issues.

Basic legal services include:

- (1) reviewing or drafting ordinances, summaries, resolutions, contracts, agreements, deeds, easements;
- (2) providing advice regarding government operations, elections, open meetings, public records, Port District ordinances and Bylaws, State law, routine matters, personnel matters, and property matters including real estate acquisition and sale, zoning, condemnation and public finance;
- (3) reviewing agendas and materials for Board of Commissioner meetings as requested and anticipating and preparing legal advice on items to be addressed at the Board of Commissioner meetings;
- (4) attend any Special meeting or Closed session called by the Board President, at their request; and
- (5) providing legal opinions upon request.

Typically, the General Counsel may anticipate the position to require 8-30 hours per month. The Port District may work in-house to produce initial drafts, such as of Port District ordinances and resolutions, prior to the attorney's review. The Port District may also seek outside specialized counsel as necessary.

The General Counsel will be required to provide a detailed, itemized billing on a monthly basis, in order to avoid misunderstanding. A standing request exists for legal review of contracts, ordinances and resolutions presented to Board of Commissioners for consideration at its regular meeting in addition to anticipating and preparing legal advice on issues up for consideration, as well as attendance (in person or teleconference) at Regular or Special Commissioner meetings. The General Counsel is required to provide legal services upon request of the Port Manager/CEO, or by direction of the Board as a whole. For all other requests, including citizen's inquiries, approval by Board President or Port Manager/CEO prior to commencement of service is required. General Counsel will be required to generally familiarize themselves with general municipal law and keep abreast of legislation affecting Districts outside the scope of billable services.

## REQUESTED INFORMATION

If you or your firm is interested in the opportunity to work with the Port District, please provide the following information:

- Firm or individual name and contact information, including e-mail and website addresses and year organized.
- Summary of qualifications, specializations, experience (including Special District), professional affiliation, special training, availability, Oregon Bar license numbers, and contact information for key personnel and proposed lead and back-up attorneys for the District.
- Information on any previous experience or services provided, including Special District experience, such as General Counsel services, district or city-related court cases, litigation experience, list of past or present Special District clients, etc.
- List of clients you currently represent that could cause a conflict of interest with your responsibilities as General Counsel. Describe how you would be willing to resolve these or any future conflicts of interest.
- If your firm or you have filed any litigation in the past five years in which the Port District or one of its employees was named as a party, please describe the case(s).
- Other factors or special considerations you feel would influence your selection.
- List of references and contact information.
- Proposed hourly rates for each attorney assigned to the Port District or any alternative fee structure you propose.

## OTHER TERMS AND CONDITIONS:

The Port District reserves the right to reject any or all responses. The Port District reserves the right to waive any variances from original RFQ specifications in cases where the variances are considered to be, in the sole discretion of the Port District, in the best interests of the Port District. The proposing firm is solely responsible for the costs of preparing or submitting proposal in response to this RFQ.

All proposals submitted in response to this RFQ shall become the property of the Port District. The Port District retains the right to use any or all information presented in any proposal to the RFQ, whether amended or not. Selection or rejection of the proposal does not affect this right.

Contracts shall be awarded to the applicant determined to be best qualified to meet the District's needs, with a mutually agreeable start date.

## EVALUATION AND SELECTION CRITERIA

- General qualifications of the candidate for the position and key support personnel
- Quality and extent of services available
- Experience
- References
- Costs
- Compliance with this Request for Qualifications

- Other criteria which pertain to providing effective and efficient legal services such as availability for questions and contact, timeliness, responsiveness and follow-through

## **SUBMITTAL**

Please provide two (2) unbound copies of the proposal, including one original with the signature of an authorized individual on a typed letter of submittal. Proposals shall be submitted in a sealed envelope, clearly marked on the outside of the envelope, "General Counsel Services" and addressed to:

Port of Brookings Harbor  
RE: General Counsel Services  
16330 Lower Harbor Road  
Brookings, OR 97415

Any questions regarding this submittal may be addressed to the Port Manager at 541-469-2218, Ext 406 or by email at [portmanager@portofbrookingsharbor.com](mailto:portmanager@portofbrookingsharbor.com).

## **ABOUT THE PORT OF BROOKINGS HARBOR:**

- The Port of Brookings Harbor represents over 75 percent of the population base for Curry County.
- The Port of Brookings is the busiest recreational Port on the Oregon Coast with more than 31,000 bar crossings and more than 95,000 recreational users annually.
- The Port has more than 5,000 commercial fishing vessels that visit the Port annually.
- The Port moves more than 20 million pounds of bait, fuel, ice and fish products across its docks annually.
- Because of its location and geographical configuration, the Port of Brookings Harbor is listed as a "Harbor of Refuge" by the U.S. Coast Guard.
- The Chetco River, on which the Port is located, is the safest bar on the Oregon Coast with more than 280 passable days per year.
- The Port of Brookings Harbor is classified as a Shallow-draft harbor. Shallow-draft harbors are defined as those with 14 feet or less depth.
- Shallow-draft harbors are dependent upon commercial and recreational fishing to maintain port infrastructure.
- The Port owns and operates RV Park, Fuel Dock and Moorages. Provides vessel haul-outs at the boat yard which is leased to a boat repair company. Landlord to 34 tenants throughout Port properties. Tenants range from retail to restaurants, commercial fish receiving companies and repair shops.

**REQUEST FOR QUALIFICATIONS  
TO PROVIDE GENERAL COUNSEL SERVICES  
TO THE PORT OF BROOKINGS HARBOR**

The Port of Brookings Harbor seeks proposals from qualified attorneys to fill the role of General Counsel Services for the Port. The Request for Qualifications for General Counsel Services describes the scope of services, qualifications, and selection process. Contact Gary Dehlinger at 541-469-2218 or at [portmanager@portofbrookingsharbor.com](mailto:portmanager@portofbrookingsharbor.com) or go to [www.portofbrookingsharbor.com](http://www.portofbrookingsharbor.com) for the RFQ. Proposal submittals must be directed to: Port of Brookings Harbor – General Counsel Services – 16330 Lower Harbor Road, Brookings OR 97415. **RFQ Due Date: November 30, 2021 at 2:00pm.**

Publish: November 5  
November 12  
November 19  
November 26

# INFORMATION ITEM – C

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**DATE:** November 17, 2021  
**RE:** DEQ Stormwater Testing Results  
**TO:** Honorable Board President and District Board Members  
**ISSUED BY:** Gary Dehlinger, Port Manager

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## OVERVIEW

- Port completed its third out of four yearly stormwater tests on October 26, 2021. Samples were taken early in the morning towards the end of a large rainstorm that began late the night before. We have 12 hours to take the samples once a discharge begins.
- Test results show the Boat Yard failed the copper benchmark and gear storage failed the aluminum benchmark.
- Because the Boat Yard outfall 103 is already under a Tier II status for copper, a corrective action report will need to be completed by an engineer.
- Gear storage outfall 302 is under Tier I status. Tier I Report was completed for this benchmark exceedance.

## DOCUMENTS

- Tier I Report Form, 2 pages
- Statewide Benchmark, 1 page
- Stormwater Test Results, 6 pages





State of Oregon  
Department of  
Environmental  
Quality

## Department of Environmental Quality Industrial Stormwater Permits Tier I Report Form

Instructions: Fill out this form if stormwater sampling results show an exceedance of any statewide benchmark(s), sector specific benchmark(s), or reference concentration(s) for impairment pollutants identified in the permit assignment letter. If you need additional space to answer the questions below, please attach additional sheet(s). The form must be filled out within 30 days of receiving analytical results. If no changes to the SWPCP are required or for benchmark exceedances, please retain this form onsite.

**Submit Tier I report no later than 60 calendar days after receiving monitoring results for a sample that exceeds an impairment reference concentration.**

Date Form Prepared: November 3, 2021

Facility Name: Port of Brookings Harbor

File Number #: 126385

County: Curry County

SIC Code(s): 4493, 2092

Prepared By: Gary Dehlinger

Phone Number: 541-469-2218

E-mail Address: portmanager@portofbrookingsharbor.com

Form is being filled out in response to:

Statewide Benchmark Exceedance (list analyte(s)): Aluminum

Sector Specific Benchmark Exceedance (list analytes(s)):

Impairment Pollutant Reference Concentration Exceedance (list analyte(s)):

Date Sampling Occurred: October 26, 2021

Date Lab Results Received: October 28, 2021

Describe the result(s) of the investigation of the elevated pollutant levels:

Outlet 302 Gear Storage exceeded the benchmark for aluminum. Lack of developed stormwater control infrastructure such as paved surfaces and proper stormwater drainage could be a major contributor.

Describe the corrective action(s) you will take to address the benchmark exceedence(s):

We will replace and add more filter media bags at the outlet. Also look into moving items in gear storage away from the outlet. The Port has two FEMA disaster projects that will incorporate stormwater control in the areas of the failed tests. The projects are estimated to begin as early as 2022 and could run several years to complete.

Date corrective action(s) completed or expected to be completed: 11/30/2021

Are SWPCP revisions necessary?  Yes  No  
If "Yes", please describe revisions below:

Please submit the revised pages of the SWPCP to DEQ or Agent, including a schedule for implementing the control measures.

**1200-Z NPDES Monitoring Requirements**

You must monitor for the pollutants in the table below. If discharge to a Category 5: 303(d) listed receiving water for pH, total copper, total lead, total zinc and/or E. coli, the table below will not include statewide or sector-specific benchmarks for those pollutants. Exceedance of impairment monitoring may escalate to a water quality-based effluent limit during this permit cycle. Please read Schedule A.13 and Schedule C carefully. Tier 2 geometric mean evaluations are required annually. Please read Schedule A.12 carefully.

<b>Georegion</b>	<b>Pollutant</b>	<b>Statewide Benchmark</b>	<b>Unit</b>	<b>Frequency</b>
Marine Waters	Total Copper	0.025	mg/L	Four times per year
Marine Waters	Total Lead	1.10	mg/L	Four times per year
Marine Waters	Total Zinc	0.46	mg/L	Four times per year
Marine Waters	pH	6.0 - 9.0	s.u.	Four times per year
Marine Waters	TSS	100	mg/L	Four times per year
<b>SIC code of Industrial Activity</b>	<b>Pollutant</b>	<b>Sector-specific Benchmark</b>	<b>Units</b>	<b>Frequency</b>
4493	Total Aluminum	1.10	mg/L	Four times per year
2092	N/A	N/A	N/A	N/A
<b>Receiving Water LLID: 1242700420450 AUID: 100278 River Mile: 0.15</b>	<b>Pollutant</b>	<b>Impairment Concentration</b>	<b>Units</b>	<b>Frequency</b>
Chetco River	N/A	N/A	N/A	N/A
<b>Technology-based Effluent Limit</b>	<b>Pollutant</b>	<b>Numeric Effluent Limit</b>	<b>Units</b>	<b>Frequency</b>
N/A	N/A	N/A	N/A	N/A

## Sample Information

Sample ID:	22103638	Collectors Name:	Gary Dehlinger
Address of Source:	16330 Lower Harbor Road	Sample Point:	103 - Boat Yard
Project Name:	Port of Brookings Harbor	Source:	N/A
Received Date:	10/26/2021	Treatment System:	None

## Results of Chemical Analysis

Sample Notes:	103 - Boat Yard		Collection Date:		10/26/21 9:02 AM				
Contaminant	Method	LOQ	RESULTS	Units	EPA Limit	Date Analyzed	Analyst	ID	Data Flags
Copper	EPA 200.7	0.006	0.1930	mg/L		10/27/21 11:04 am	JNS	AA	
Lead	SM 3113 B	0.01	ND	mg/L		10/27/21 11:33 am	JNS	AB	
Zinc	EPA 200.7	0.06	0.1773	mg/L		10/27/21 11:04 am	JNS	AC	
Total Suspended Solids	EPA 160.2	1.0	6.00	mg/L		10/28/21 10:35 am	JNS	AE	
Aluminum	EPA 200.7	0.04	0.4536	mg/L		10/27/21 11:04 am	JNS	AF	

**DEFINITIONS AND DATA FLAGS**

- |   |  |
|---|--|
| <p>A Analysis is covered under ORELAP scope of Accreditation</p> <p>AA Analysis is covered under ISO scope of Accreditation</p> <p>C Sample did not meet acceptance criteria</p> <p>H Analysis performed outside method hold time</p> <p>ID Subsample identifier for each Sample number</p> <p>M Matrix Spike recovery is out of control limits due to matrix interference<br/>The LCS was in acceptance limits showing the analysis is in control and the data is acceptable</p> | <p>E Estimated Value</p> <p>LOQ Reporting Limit</p> <p>N/A Not Applicable</p> <p>ND None Detected</p> <p>S Sample Outsourced</p> |
|---|--|

**Results Color Key**

White - No EPA Limit

Low Risk  
within EPA Limit

Medium Risk

High Risk  
Exceeds EPA Limit

Call the Lab to Discuss

372

## Sample Information

Sample ID:	22103637	Collectors Name:	Gary Dehlinger
Address of Source:	16330 Lower Harbor Road	Sample Point:	203 - Fuel Dock
Project Name:	Port of Brookings Harbor	Source:	N/A
Received Date:	10/26/2021	Treatment System:	None

## Results of Chemical Analysis

Sample Notes:	203 - Fuel Dock		Collection Date:		10/26/21 8:55 AM				
Contaminant	Method	LOQ	RESULTS	Units	EPA Limit	Date Analyzed	Analyst	ID	Cost Flags
Copper	EPA 200.7	0.006	ND	mg/L		10/27/21 11:01 am	JNS	AA	
Lead	SM 3113 B	0.01	ND	mg/L		10/27/21 11:33 am	JNS	AB	
Zinc	EPA 200.7	0.06	0.0861	mg/L		10/27/21 11:01 am	JNS	AC	
Total Suspended Solids	EPA 160.2	1.0	18.00	mg/L		10/28/21 10:35 am	JNS	AE	
Aluminum	EPA 200.7	0.04	0.1372	mg/L		10/27/21 11:01 am	JNS	AF	

**DEFINITIONS AND DATA FLAGS**

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>A Analysis is covered under ORELAP scope of Accreditation</li> <li>AA Analysis is covered under ISO scope of Accreditation</li> <li>C Sample did not meet acceptance criteria</li> <li>H Analysis performed outside method hold time</li> <li>ID Subsample Identifier for each Sample number</li> <li>M Matrix Spike recovery is out of control limits due to matrix interference<br/>The LCS was in acceptance limits showing the analysis is in control and the data is acceptable</li> </ul> | <ul style="list-style-type: none"> <li>E Estimated Value</li> <li>LOQ Reporting Limit</li> <li>N/A Not Applicable</li> <li>ND None Detected</li> <li>S Sample Outsourced</li> </ul> |
|--|---|

Results Color Key
White - No EPA Limit
Low Risk within EPA Limit
Medium Risk
High Risk Exceeds EPA Limit
Call the Lab to Discuss

373

## Sample Information

Sample ID:	22103636	Collectors Name:	Gary Dehlinger
Address of Source:	16330 Lower Harbor Road	Sample Point:	202 - Hallmark
Project Name:	Port of Brookings Harbor	Source:	N/A
Received Date:	10/26/2021	Treatment System:	None

## Results of Chemical Analysis

Sample Notes:	202 - Hallmark		Collection Date:	10/26/21 8:42 AM				
Contaminant	Method	LOQ	RESULTS	Units	EPA Limit	Date Analyzed	Analyst ID	Data Flags
Copper	EPA 200.7	0.006	ND	mg/L		10/27/21 10:59 am	JNS AA	
Lead	SM 3113 B	0.01	ND	mg/L		10/27/21 11:33 am	JNS AB	
Zinc	EPA 200.7	0.06	ND	mg/L		10/27/21 10:59 am	JNS AC	
Total Suspended Solids	EPA 160.2	1.0	26.00	mg/L		10/28/21 10:35 am	JNS AE	
Aluminum	EPA 200.7	0.04	0.3406	mg/L		10/27/21 10:59 am	JNS AF	

**DEFINITIONS AND DATA FLAGS**

- |   |  |
|---|--|
| <p>A Analysis is covered under ORELAP scope of Accreditation</p> <p>AA Analysis is covered under ISO scope of Accreditation</p> <p>C Sample did not meet acceptance criteria</p> <p>H Analysis performed outside method hold time</p> <p>ID Subsample Identifier for each Sample number</p> <p>M Matrix Spike recovery is out of control limits due to matrix interference<br/>The LCS was in acceptance limits showing the analysis is in control and the data is acceptable</p> | <p>E Estimated Value</p> <p>LOQ Reporting Limit</p> <p>N/A Not Applicable</p> <p>ND None Detected</p> <p>S Sample Outsourced</p> |
|---|--|

**Results Color Key**

White - No EPA Limit

Low Risk  
within EPA Limit

Medium Risk

High Risk  
Exceeds EPA Limit

Call the Lab to Discuss

374

## Sample Information

Sample ID:	22103635	Collectors Name:	Gary Dehlinger
Address of Source:	16330 Lower Harbor Road	Sample Point:	304 -Receiving Dock
Project Name:	Port of Brookings Harbor	Source:	N/A
Received Date:	10/26/2021	Treatment System:	None

## Results of Chemical Analysis

Sample Notes:	304 -Receiving Dock		Collection Date:	10/26/21 8:38 AM				
Contaminant	Method	LOQ	RESULTS	Units	EPA Limit	Date Analyzed	Analyst ID	Data Flags
Copper	EPA 200.7	0.006	ND	mg/L		10/27/21 10:56 am	JNS AA	
Lead	SM 3113 B	0.01	ND	mg/L		10/27/21 11:33 am	JNS AB	
Zinc	EPA 200.7	0.06	0.0682	mg/L		10/27/21 10:56 am	JNS AC	
Total Suspended Solids	EPA 160.2	1.0	26.00	mg/L		10/28/21 10:35 am	JNS AE	
Aluminum	EPA 200.7	0.04	0.1037	mg/L		10/27/21 10:56 am	JNS AF	

**DEFINITIONS AND DATA FLAGS**

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>A Analysis is covered under ORELAP scope of Accreditation</li> <li>AA Analysis is covered under ISO scope of Accreditation</li> <li>C Sample did not meet acceptance criteria</li> <li>H Analysis performed outside method hold time</li> <li>ID Subsample identifier for each Sample number</li> <li>M Matrix Spike recovery is out of control limits due to matrix interference<br/>The LCS was in acceptance limits showing the analysis is in control and the data is acceptable</li> </ul> | <ul style="list-style-type: none"> <li>E Estimated Value</li> <li>LOQ Reporting Limit</li> <li>N/A Not Applicable</li> <li>ND None Detected</li> <li>S Sample Outsourced</li> </ul> |
|--|---|

**Results Color Key**

White - No EPA Limit

Low Risk  
within EPA Limit

Medium Risk

High Risk  
Exceeds EPA Limit

Call the Lab to Discuss

375

## Sample Information

Sample ID:	22103634	Collectors Name:	Gary Dehlinger
Address of Source:	16330 Lower Harbor Road	Sample Point:	302 - Gear Storage
Project Name:	Port of Brookings Harbor	Source:	N/A
Received Date:	10/26/2021	Treatment System:	None

## Results of Chemical Analysis

Sample Notes:	302 - Gear Storage		Collection Date:	10/26/21 8:35 AM				
Contaminant	Method	LOQ	RESULTS	Units	EPA Limit	Date Analyzed	Analyst ID	Data Flag
Copper	EPA 200.7	0.006	0.0095	mg/L		10/27/21 10:53 am	JNS AA	
Lead	SM 3113 B	0.01	ND	mg/L		10/27/21 11:33 am	JNS AB	
Zinc	EPA 200.7	0.06	ND	mg/L		10/27/21 10:53 am	JNS AC	
Total Suspended Solids	EPA 160.2	1.0	26.00	mg/L		10/28/21 10:35 am	JNS AE	
Aluminum	EPA 200.7	0.04	1.6777	mg/L		10/27/21 10:53 am	JNS AF	

### DEFINITIONS AND DATA FLAGS

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>A Analysis is covered under ORELAP scope of Accreditation</li> <li>AA Analysis is covered under ISO scope of Accreditation</li> <li>C Sample did not meet acceptance criteria</li> <li>H Analysis performed outside method hold time</li> <li>ID Subsample Identifier for each Sample number</li> <li>M Matrix Spike recovery is out of control limits due to matrix interference<br/>The LCS was in acceptance limits showing the analysis is in control and the data is acceptable</li> </ul> | <ul style="list-style-type: none"> <li>E Estimated Value</li> <li>LOQ Reporting Limit</li> <li>N/A Not Applicable</li> <li>ND None Detected</li> <li>S Sample Outsourced</li> </ul> |
|--|---|

**Results Color Key**

White - No EPA Limit

Low Risk  
within EPA Limit

Medium Risk

High Risk  
Exceeds EPA Limit

Call the Lab to Discuss

376



## Sample Information

Sample ID: <b>22103633</b>	Collectors Name: Gary Dehlinger
Address of Source: 16330 Lower Harbor Road	Sample Point: 305 - BC Gear Storage
Project Name: Port of Brookings	Source: N/A
Received Date: 10/26/2021	Treatment System: None

## Results of Chemical Analysis

Sample Notes:	305 - BC Gear Storage		Collection Date:	10/26/21 8:27 AM				
Contaminant	Method	LOQ	RESULTS	Units	EPA Limit	Date Analyzed	Analyst ID	Data Flags
Copper	EPA 200.7	0.006	<b>0.0072</b>	mg/L		10/27/21 10:50 am	JNS AA	
Lead	SM 3113 B	0.01	<b>ND</b>	mg/L		10/27/21 11:33 am	JNS AB	
Zinc	EPA 200.7	0.06	<b>ND</b>	mg/L		10/27/21 10:50 am	JNS AC	
Total Suspended Solids	EPA 160.2	1.0	<b>48.00</b>	mg/L		10/28/21 10:35 am	JNS AE	
Aluminum	EPA 200.7	0.04	<b>0.5710</b>	mg/L		10/27/21 10:50 am	JNS AF	

### DEFINITIONS AND DATA FLAGS

A Analysis is covered under ORELAP scope of Accreditation AA Analysis is covered under ISO scope of Accreditation C Sample did not meet acceptance criteria H Analysis performed outside method hold time ID Subsample Identifier for each Sample number M Matrix Spike recovery is out of control limits due to matrix interference The LCS was in acceptance limits showing the analysis is in control and the data is acceptable	E Estimated Value LOQ Reporting Limit N/A Not Applicable ND None Detected S Sample Outsourced
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Results Color Key
White - No EPA Limit
Low Risk within EPA Limit
Medium Risk
High Risk Exceeds EPA Limit
Call the Lab to Discuss

377