# **Pacific County** Pacific Co FD1 Site Development Long Beach, Washington

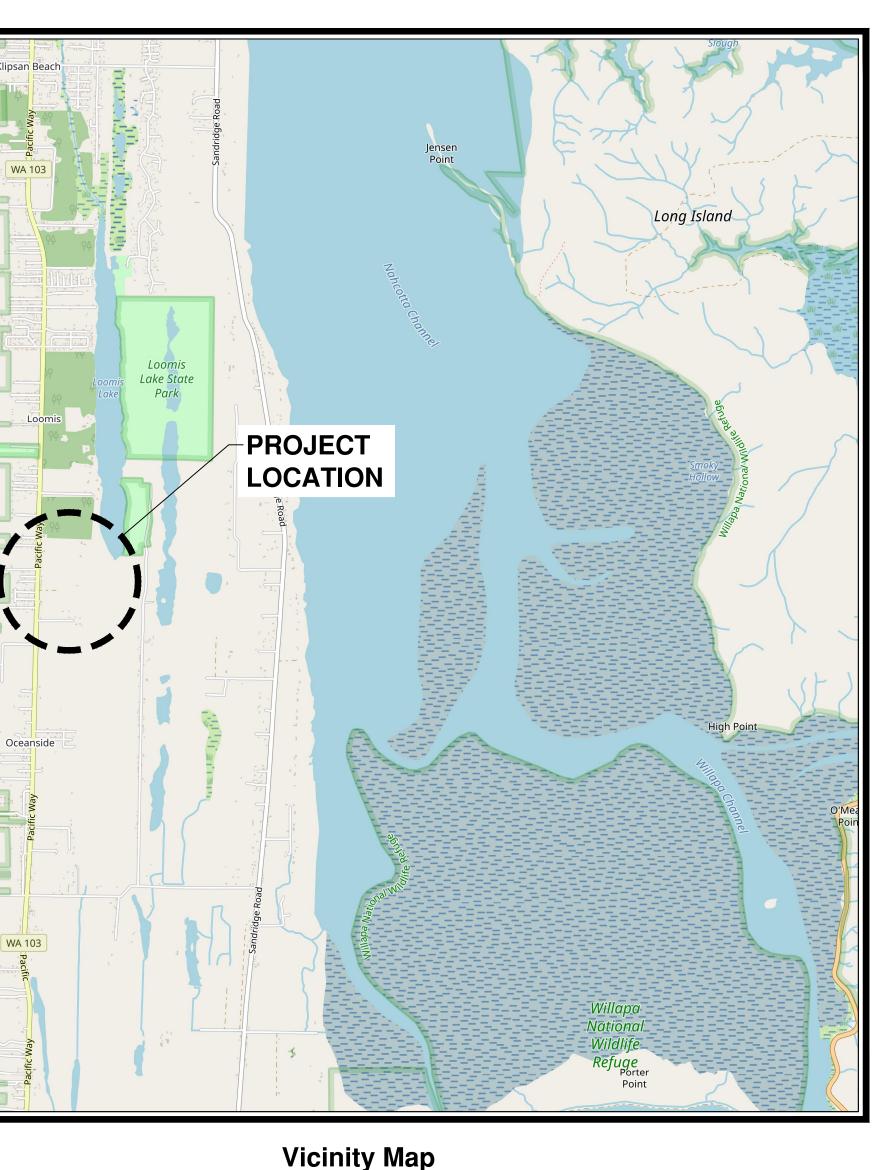
**Project Directory** 

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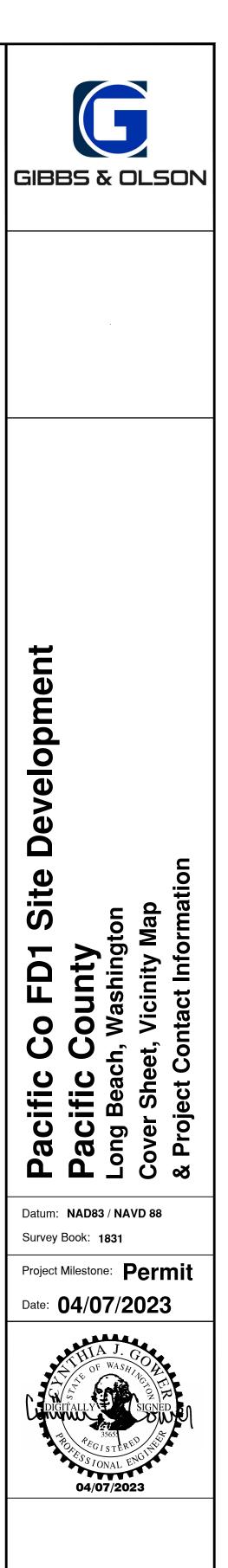
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**APPROVED BY:** 

**Pacific County** 

**Public Works Director Grace Amundsen-Barnkow** 



Designed by: CJG Checked by: TJG Approved by: CJG

> Project Number: 0788.0245

Drawing Number: **C0.0** 

Sheet Number:

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DATE\_

**Pacific County** 

# **Abbreviations**

ADJ AC ASPH ASSY AVE	Adjust Asphalt Concrete Asphalt Assembly Avenue	FH FL FLG FND FOC
BC BFV	Back of Curb Butterfly Valve	GV HDPE
BLKG BLDG	Blocking Building	hma Horiz
BVC	Begin Vertical Curve	HYD
BVCE	Begin Vertical Curve Elevation	ILLUM
BVCS	Begin Vertical Curve Station	INV
CARV	Combination Air Release Valve	IE
CB	Catch Basin	INT
CDF	Control Density Fill	IP JUNCT
CI CL	Cast Iron Centerline	LT
CL	Class	LF
CMP	Corrugated Metal Pipe	LS
CO	Clean Out	MAX
CONC	Concrete	MD
CONST	Construction	MG/L
CONTR	Contractor	MIN
CPEP	Corrugated Polyethylene Storm Sewer Pipe	MH MJ
CPLG CSBC	Coupling	NAVD
CSTC	Crushed Surfacing Base Course Crushed Surfacing Top Course	(N)
DI	Ductile Iron	(NE)
DIA	Diameter	(NŴ)
DL	Daylight Earthwork	NTS
DS	Downspout	OD
DTL	Detail	O/S
DWG	Drawing	PC PE
DWY	Driveway	PERF
(E) EC	East Erosion Control	PERM
EG	Existing Grade	PL
EGC	Existing Grade at Centerline	PT
ELEV	Elevation	PVC
EP	Edge of Pavement	PVMT
EVC	End Vertical Curve	PKG
EVCE	End Vertical Curve Elevation	PRV PT
EVCS EX	End Vertical Curve Station Existing	PVI
FCA	Flange Coupling Adapter	PVIE
FDC	Fire Department Connection	PVIS
FG	Finish Grade	R
FGC	Finish Grade at Centerline	RBC

Fire Hydrant Flow Line Flange Found Face of Curb Gate Valve High Density Polyethylene Hot Mix Asphalt Horizontal Hydrant Illumination
Invert Invert Elevation
Intersection
Iron Pipe
Junction
Left
Linear Feet Landscaped Surface
Maximum
Measure Down
Milligrams per Liter
Minimum
Manhole
Mechanical Joint North American Vertical Datum
North
Northeast
Northwest
Not to Scale
Outside Diameter
Offset
Point of Curvature
Professional Engineer Perforated
Permanent
Property Line
Point of Tangency
Polyvinyl Chloride
Pavement
Parking
Pressure Reducing Valve Point of Tangency
Point of Vertical Intersection
Point of Vertical Intersection Elevatio Point of Vertical Intersection Station Radius Rebar and Cap
Hobar and Oap

REQ'D	Required	
RPBA	Reduced Pressure Backflow Assembly	
RT	Right	TV-
ROW	Right-of-Way	
S	Slope	
(S)	South	
SD	Storm Drain	
SDCB	Storm Drain Catch Basin	
SDMH	Storm Drain Manhole	
SDR	Sidewall Dimension Ratio	V
(SE)	Southeast	X
SHT	Sheet	G -
SS	Sanitary Sewer	
SSCO	Sanitary Sewer Clean Out	
SSMH	Sanitary Sewer Manhole	
SST	Stainless Steel	
ST	Street	
STA	Station	OP -
STD	Standard	
STRUCT	Structure	
SW	Sidewalk	
(SW)	Southwest	SS
TC	Top of Curb	
TELE	Telephone	SD
TEMP	Temporary	T -
TESC THRU	Temporary Erosion and Sediment Control	
TP	Through Top of Pipe	
TRANS	Transition	TOE TO
TYP	Typical	тор то
UNO	Unless Noted Otherwise	
V	Vertical	
vc	Vertical Curve	
VERT	Vertical	
W/	With	WL
(W)	West	
WŚE	Water Surface Elevation	
SYMBOLS		
JINDULJ		
Δ	Delta	- //• //• //• //• //• //• //•
#	Number	
&	And	
@	At	o
Ø	Diameter	

# **Project Specifications**

# General Notes

- . ALL WORK SHALL BE IN CONFORMANCE WITH THE EXISTING LABOR LAWS, SAFETY REQUIREMENTS AND OTHER REGULATIONS, AS REQUIRED BY PACIFIC COUNTY, THE STATE OF WASHINGTON, THE FEDERAL GOVERNMENT AND THE OWNER. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD HARMLESS FROM ANY LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER.
- ALL WORK AND MATERIAL SHALL MEET THE REQUIREMENTS OF THE APPLICABLE DETAILS SHOWN ON THE DRAWINGS, AND CONFORM TO THE CURRENT STANDARD SPECIFICATIONS FOR ROAD. BRIDGE AND MUNICIPAL CONSTRUCTION, INCLUDHING SECTION 1-99 APWA SUPPLEMENTS, AS AMENDED, AS ISSUED BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) AND THE AMERICAN PUBLIC WORKS ASSOCIATION (APWA), WASHINGTON STATE CHAPTER. HEREAFTER SECTION NUMBERS REFER TO WSDOT SPECIFICATIONS UNLESS NOTED OTHERWISE.
- . IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE A COPY OF THESE PLANS AND SPECIFICATIONS ON THE CONSTRUCTION SITE AT ALL TIMES.
- ALSO INCORPORATED INTO THESE CONTRACT DOCUMENTS BY REFERENCE ARE:
- a. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (MUTCD), CURRENT EDITION, WITH WSDOT MODIFICATIONS, IF ANY;
- b. PACIFIC COUNTY CONSTRUCTION STANDARDS; CONTRACTOR SHALL OBTAIN COPIES OF THESE PUBLICATIONS AT OWN EXPENSE AND HAVE ACCESSIBLE ON-SITE AT ALL TIMES DURING CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, TRANSPORTATION, SUPPLIES, AND INCIDENTALS REQUIRED TO COMPLETE ALL WORK SHOWN ON THESE DRAWINGS AND TO OBTAIN ACCEPTANCE BY THE CITY AND THE PROJECT OWNER.
- THE CONTRACTOR SHALL CONFORM TO LABOR AND INDUSTRIES REQUIREMENTS WITH REGARD TO SAFETY, CONFINED SPACE ENTRY, AND ALL OTHER APPLICABLE SECTIONS TO THIS PROJECT.
- 3. THE INTENT OF THESE DRAWINGS IS TO DESCRIBE A COMPLETE WORK. OMISSIONS FROM THE DRAWINGS OF DETAILS OF WORK WHICH ARE NECESSARY TO CARRY OUT THE INTENT OF THE DRAWINGS SHALL NOT RELIEVE THE CONTRACTOR FROM PERFORMING THE OMITTED WORK.
- THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH ADJACENT PROPERTY OWNERS. DRIVEWAYS AND UTILITY SERVICES SHALL REMAIN ACCESSIBLE AT ALL TIMES.
- 10. CONTRACTOR SHALL NOTIFY AND COORDINATE WITH OTHER UTILITIES AS NEEDED FOR DURATION OF THE PROJECT.
- 11. A PROPOSED ALTERATION BY THE CONTRACTOR AFFECTING THE REQUIREMENTS AND INFORMATION IN THESE DRAWINGS SHALL BE IN WRITING AND WILL REQUIRE APPROVAL OF ENGINEER AND OWNER.
- 12. ALL CONNECTIONS TO WATER, SEWER, AND STORM DRAIN SYSTEMS, I.E., TIE-INS OR RELOCATIONS, WILL REQUIRE SHOP DRAWINGS PRIOR TO CONSTRUCTION.
- 13. ALL MATERIAL SUBMITTALS TO BE APPROVED PRIOR TO CONSTRUCTION INCLUDING SHOPS DRAWINGS, TRAFFIC CONTROL PLANS, SHUT DOWN NOTICES, AND FLUSHING NOTICES.
- 14. PRIOR TO SUBMITTING MANHOLE/CATCH BASIN SHOP DRAWINGS, CONTRACTOR TO POTHOLE AND VERIFY ALL STORM DRAIN ELEVATIONS, PIPE SIZE AND MATERIAL TYPE.
- 15. THE CONTRACTOR SHALL SUBMIT CATALOG DATA, CUT SHEETS, SHOP DRAWINGS AND OTHER INFORMATION TO THE ENGINEER AND THE OWNER FOR REVIEW OF MATERIALS AND CONSTRUCTION PROCEDURES FOR ALL MAJOR MATERIALS, APPURTENANCES, AND EQUIPMENT

MAJOR MATERIALS INCLUDE PIPE, DRAINAGE STRUCTURES, BACKFILL MATERIAL, CRUSHED SURFACING MATERIAL, CONCRETE AND ASPHALT.

- 16. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL "PRE-CONSTRUCTION" STATE OR BETTER.
- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REGULARLY INSPECTED AND 17. TEMPORARY STREET PATCHING SHALL BE ALLOWED AS APPROVED BY THE PORT OF WOODLAND. MAINTAINED TO ENSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION ALL TEMPORARY STREET PATCHING SHALL BE PROVIDED BY PLACEMENT AND COMPACTION OF THROUGHOUT THE DURATION OF THE PROJECT. HOT MIXED ASPHALT WITH A NOMINAL DEPTH OF 2 INCHES. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY PATCHES AS REQUIRED 9. ANY SOIL, SEDIMENT, OR DEBRIS TRANSPORTED ONTO ROADWAYS, SIDEWALKS, OR ANY PUBLIC RIGHT-OF-WAY SHALL BE REMOVED IMMEDIATELY BY SHOVELING AND/OR SWEEPING.
- 18. CONTRACTOR TO PROVIDE SHORING MEETING THE REQUIREMENTS OF SECTION 7-08.3(1)B OF THE STANDARD SPECIFICATIONS.

# **Utilities Location**

APPROXIMATE LOCATIONS OF EXISTING UTILITIES HAVE BEEN OBTAINED FROM AVAILABLE EXISTING UTILITIES PRIOR TO CONSTRUCTION TO VERIFY DEPTH.

# Work Within the Right-of-Way

CONTRACTOR SHALL OBTAIN A RIGHT OF WAY PERMIT PRIOR TO ANY WORK WITHIN WSDOT PACIFIC COUNTY PUBLIC WORKS STANDARDS.

## **Erosion and Sediment Controls**

- EROSION AND SEDIMENT CONTROLS SHALL COMPLY WITH SECTION 8-01 OF THE WSDOT SPECIFICATIONS.
- 2. CONTRACTOR(S) SHALL COMPLY WITH THE EROSION CONTROL REQUIREMENTS OF PACIFIC STORMWATER GENERAL PERMIT ISSUED BY ECOLOGY.
- 3. CONTROLLING POLLUTION, EROSION, RUN-OFF, AND RELATED DAMAGE WILL REQUIRE THE
- WHERE THE PROPOSED IMPROVEMENTS ARE TO BE CONSTRUCTED UNDER EXISTING ASPHALT OR COUNTY, WASHINGTON STATE DEPARTMENT OF ECOLOGY (ECOLOGY) AND THE CONSTRUCTION CEMENT CONCRETE SURFACING, OR WHERE THE EXISTING PAVEMENT IS TO BE EXTENDED OR REPLACED, THE CONTRACTOR SHALL PROVIDE A VERTICAL AND HORIZONTALLY STRAIGHT CUT OF THE SURFACE AT A MINIMUM DEPTH OF SIX INCHES OR THE DEPTH OF THE EXISTING SURFACE, CONTRACTOR TO PERFORM TEMPORARY WORK. THIS WORK INCLUDES BUT IS NOT LIMITED TO: WHICHEVER IS LESS. WHERE REMOVAL OF ASPHALT OR CONCRETE IS REQUIRED FOR UTILITY INSTALLATION, TWO SAWCUTS ON EACH SIDE OF THE TRENCH WILL BE REQUIRED: THE FIRST a. COVER STOCK PILES TO PREVENT MIGRATION OF SEDIMENT TO STORMWATER COLLECTION SAWCUT SHALL BE AT A LOCATION THAT WILL ALLOW THE PIPE TO BE INSTALLED; THE SECOND SYSTEMS AND NEIGHBORING PROPERTIES, AND/OR PROVIDE SILT FENCES AND/OR HAY BALES SET OF SAWCUTS SHALL BE PERFORMED JUST PRIOR TO THE INSTALLATION OF THE NEW ASPHALT TO COMPLETELY ENCLOSE THE AREA DOWN SLOPE OF STOCK PILES. OR CONCRETE SURFACING THAT WILL ABUT THE SAWCUT. THE CONTRACTOR SHALL PERFORM b. PROVIDE A CONSTRUCTION ENTRANCE AS SHOWN ON THE DRAWINGS AT CONSTRUCTION THE SAWCUT WITH A SELF-PROPELLED, WATER COOLED MACHINE SPECIFICALLY DESIGNED TO EQUIPMENT ACCESS POINTS TO ROADWAYS AND STREETS. PREVENT TRACKING OF SOILS AND CUT ASPHALT OR CEMENT CONCRETE SURFACING. PAVEMENT RESTORATION SHALL BE PER THE WATER RUN-OFF ONTO ROADWAYS AND STREETS, TAKE APPROPRIATE EROSION CONTROL PLANS AND DETAILS.
- MEASURES, AND RESTORE TO PRECONSTRUCTION CONDITION.
- 4. TEMPORARY EROSION CONTROL SHALL BE EXERCISED BY MINIMIZING EXPOSED AREAS AND SLOPES UNTIL PERMANENT MEASURES ARE EFFECTIVE. PLASTIC SHEET COVERING SHALL BE Excavation and Fill PLACED OVER EXPOSED GROUND AREAS TO PROTECT FROM RAIN EROSION. OTHER ALTERNATIVE 1. EXCAVATION AND FILL SHALL COMPLY WITH SECTION 2-03 OF THE WSDOT SPECIFICATIONS. METHODS FOR EROSION CONTROL UNDER CERTAIN SITUATIONS MAY INCLUDE NETTING, MULCHING WITH BINDER, AND SEEDING.
- THE CONTRACTOR SHALL INSTALL AND MAINTAIN CONSTRUCTION SITE EROSION AND SEDIMENT 5. CONTROL FOR THE DURATION OF THE PROJECT, AS SHOWN ON THE DRAWINGS.
- 6. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND UPDATING A STORMWATER POLLUTION PREVENTION PLAN PER PACIFIC COUNTY AND ECOLOGY REQUIREMENTS. THE CONTRACTOR IS REQUIRED TO PROVIDE A CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL).

# Legends

# **Existing Line Types**

	$\rightarrow$	· · · <u> </u>		
	X	X	X	
	— G ———		G	
	— OP —		OP	
	— P ———		— P ———	
	—ss——		SS	
	—sd—		SD	
	— т ———		— т ——	
			- <u> </u>	;
			- TOE TOI	
ΛΛΛ	ΛΛΛΛΛΥ	ιΛΛΛΛ	$\chi\chi\chi\chi\chi\chi\chi$	ιλλ
	— w —		W	
			WL	
			WB	

Existing Building Existing Cable TV - Buried Existing Centerline Road Existing Concrete, Curb, Gutter and Sidewalk Existing Creek/Ditch Existing Fence Existing Gas Existing Guardrail Existing Gravel Existing Pavement Edge Existing Power - Aerial Existing Power - Buried Existing Right-Of-Way Existing Sanitary Sewer Existing Storm Drain Existing Telephone - Buried **Existing Traffic Signal** Existing Toe of Slope Existing Top of Slope Existing Brush Line Existing Water Existing Wetland Boundary Existing Wetland Buffer

# Proposed Line Types

SD	Propose
//• //• //• //• //• //• //• //• //• //•	Utility to
	Propose
6F6F	Propose

ed Storm Drain Line be Removed/Abandoned ed Saw Cut Line ed Silt Fencing

RECORDS AND ARE SHOWN FOR CONVENIENCE. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING UNDERGROUND LOCATE LINE AT 811 A MINIMUM OF TWO FULL WORKING DAYS PRIOR TO BEGINNING ANY EXCAVATION, AND BY POTHOLING ALL

RIGHT-OF-WAY. ALL WORK WITHIN THE RIGHT-OF-WAY SHALL ADHERE TO WSDOT STANDARDS AS OUTLINED IN THE PERMIT. MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE WSDOT STANDARD SPECIFICATIONS, CURRENT EDITION OF MUTCD, AND

- Existing Symbols
- X Existing Yard Light
- Q Existing Hydrant
- Existing Water Meter
- Existing Gate Valve Existing Water Vault
- Existing Mail Box
- Existing Sign
- Existing Conifer Tree
- Existing Deciduous Tree
- Existing Shrub
- -0-Existing Power Pole
- Existing Power Pole Anchor Existing Power Transformer
- Existing Power Vault
- Existing Sewer Cleanout
- Existing Sewer Manhole
- Existing Storm Culvert Existing SDCB
- Existing SDMH
- -O- Existing Telephone Pole
- Existing Telephone Pole Anchor
- Existing Telephone Riser
- $|\mathsf{O}|$ Existing Traffic Signal
- Existing Junction Box
- Existing Gas Valve Existing Traffic Signal Cabinet

## Proposed Symbols

- Proposed SDMH
- Proposed SDCB
- Proposed SDCO

# **Survey Control Notes**

- IN ACCORDANCE WITH THE PROVISIONS OF WASHINGTON ADMINISTRATIVE CODE (WAC) CHAPTER 332-120 AND THE REVISED CODE OF WASHINGTON (RCW) TITLE 58; ANY MONUMENT SHOWN ON THIS PLAN SET OR FOUND IN THE FIELD WHICH CANNOT BE PROTECTED AND WILL BE DISTURBED OR DESTROYED BY CONSTRUCTION. SHALL BE REFERENCED BY A LICENSED SURVEYOR, AND AN APPLICATION FILED WITH THE WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES (DNR), PER WAC 322-120-050 PRIOR TO THE MONUMENT BEING DISTURBED OR DESTROYED.
- THE CONTRACTOR SHALL NOTIFY THE CITY AND A COPY OF EACH DNR APPLICATION SUBMITTED SHALL BE PROVIDED TO THE CITY ENGINEER.
- WHEN CONSTRUCTION WORK IS COMPLETE, THE CONTRACTOR'S CONSTRUCTION SURVEYOR SHALL VERIFY THE MONUMENTS SHOWN ON THIS PLAN SET ARE STILL IN PLACE AND SUBMIT A STAMPED AND SIGNED REPORT TO THE CITY DOCUMENTING THEIR CONDITION. ANY MONUMENTS DISTURBED OR DESTROYED SHALL BE REPLACED BY THE CONTRACTOR'S SURVEYOR IN ACCORDANCE WITH WAC CHAPTER 332-120.
- NO PART OF THIS STATEMENT SHALL RELIEVE THE CONTRACTOR OR THEIR SURVEYOR OF ANY OTHER PROVISIONS OF THE WAC OR RCW WITH REGARDS TO DUTIES AND RESPONSIBILITIES RELATED TO SURVEY MONUMENTATION AND ITS PRESERVATION OR REPLACEMENT.

	Survey Control Data			
Point No	. Northing	Easting	Elevation	Description
#1	417662.24	745030.54	23.77	SET HUB & TACK ON WEST SHOULDER OF PACIFIC WAY; NORTH OF 168TH STREET
#2	417659.01	746409.23	25.12	SET HUB & TACK IN EAST CLEAR CUT
#3	417672.74	746312.27	23.02	SET HUB & TACK; NORTH SIDE OF ACCESS ROAD
#4	417678.59	746225.50	20.94	SET HUB & TACK; NORTH SIDE OF ACCESS ROAD
#5	417680.54	746114.58	20.24	SET HUB & TACK; NORTH SIDE OF ACCESS ROAD
#18	417893.13	745883.06	21.72	SET HUB & TACK NORTH OF FENCE LINE ON NORTH LINE
#520	417935.75	745091.95	23.20	FOUND 1/2" REBAR; 0.3 BELOW SURFACE; 0.27' SOUTH & 0.11' WEST OF CALC
#521	417816.47	745083.60	23.63	FOUND 1/2" REBAR & CAP "K. BLUHM LS 29269"
#526	417808.42	745233.38		FOUND 5/8" REBAR & CAP; TIED AT BEND INTO GROUND; "LS **349"
#530	417903.07	745696.29	19.62	FOUND 1/2" REBAR & CAP "FERRIER LS 20682"

- 7. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE AND IN WORKING CONDITION PRIOR TO ANY LAND DISTURBING ACTIVITY, INCLUDING BUT NOT LIMITED TO CLEARING, GRADING, FILLING, EXCAVATION, OR ANY CHANGE IN THE EXISTING SOIL COVER (BOTH VEGETATIVE AND NON-VEGETATIVE)
- 10. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER SITE STABILIZATION IS ACHIEVED OR AFTER MEASURES ARE NO LONGER NEEDED.
- 11. CONSTRUCTION SHALL NOT BE CONSIDERED COMPLETE AND ACCEPTABLE UNTIL ALL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. FOLLOWING STABILIZATION AND PRIOR TO COMPLETION AND/OR OCCUPANCY.
- 12. ALL SEEDING SHALL COMPLY WITH SECTION 8-02.3(9) OF THE WSDOT SPECIFICATIONS.

# Site Preparation

- 1. CLEARING AND GRUBBING SHALL COMPLY WITH SECTION 2-01 OF THE WSDOT SPECIFICATIONS. REMOVAL OF STRUCTURES AND OBSTRUCTIONS SHALL COMPLY WITH SECTION 2-02 OF THE WSDOT SPECIFICATIONS.
- 2. THE WORK SHALL INCLUDE REMOVAL OF ITEMS REQUIRED TO CONSTRUCT THE NEW FACILITIES, SAWCUTTING AND REMOVAL OF EXISTING ASPHALT OR CONCRETE PAVEMENTS.
- 3. CLEARING AND GRUBBING SHALL INCLUDE REMOVAL OF ALL MATERIAL AS SHOWN ON THE LIMITS OF THE DRAWINGS. TREES AND BRUSH SHALL BE CUT SUCH THAT NO STUMP EXTENDS ABOVE THE GROUND SURFACE MORE THAN SIX INCHES.
- 4. THE CONTRACTOR SHALL REMOVE ALL VEGETATIVE MATERIAL. THE DEPTH OF GRUBBING SHALL BE A MINIMUM OF 6". TOPSOIL MATERIAL MAY BE STOCKPILED AND REUSED IN LANDSCAPE AREAS. SEE LANDSCAPE PLAN FOR ADDITIONAL INFORMATION. UNACCEPTABLE OR EXCESS TOPSOIL MATERIAL AND OTHER STRIPPING MATERIAL IS REQUIRED TO BE TRANSPORTED OFF SITE BY THE CONTRACTOR.

2. REMOVE WASTE MATERIALS, INCLUDING UNSUITABLE EXCAVATED MATERIAL, TRASH AND DEBRIS, AND DISPOSE OF IT OFF OWNER'S PROPERTY IN A LEGAL MANNER. REPLACE UNSUITABLE TOPSOIL FURNISH ANY REQUIRED ADDITIONAL TOP SOIL, AND FINISH GRADING OF ALL AREAS OF THE SITE TO THE ELEVATIONS NOTED OR AS DIRECTED. SEE LANDSCAPE PLANS AND SPECIFICATIONS FOR TOPSOIL, GRASS SEEDING OR VEGETATION SPECIFICATIONS.

# 

3. LOCATE EXISTING UNDERGROUND UTILITIES IN AREAS OF WORK. IF UTILITIES ARE TO REMAIN IN PLACE, PROVIDE ADEQUATE MEANS OF SUPPORT AND PROTECTION DURING EARTHWORK OPERATIONS. SHOULD UNCHARTED, OR INCORRECTLY CHARTED, PIPING OR OTHER UTILITIES BE ENCOUNTERED DURING EXCAVATION, CONSULT UTILITY OWNER IMMEDIATELY FOR DIRECTIONS COOPERATE WITH OWNER AND UTILITY COMPANIES IN KEEPING RESPECTIVE SERVICES AND FACILITIES IN OPERATION. DEMOLISH AND COMPLETELY REMOVE FROM SITE EXISTING UNDERGROUND UTILITIES INDICATED TO BE REMOVED. COORDINATE WITH UTILITY COMPANIES FOR SHUT-OFF OF SERVICES IF LINES ARE ACTIVE.

**Sheet Index** 

Sheet Title

Cover Sheet, Vicinity Map

General Notes, Legends, Abbreviations

General Notes

Existing Conditions Plan

Site Preparation Plan

Site Preparation Details

Site & Grading Plan

Site Details

Site & Grading Details

Site & Grading Details

Storm Drainage Plan

Storm Drainage Details

Storm Drainage Details

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1

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C1.0

C1.1

C2.0

C2.1

C2.2

C2.3

C3.0

C3.1

C3.2

BARRICADE OPEN EXCAVATIONS OCCURRING AS PART OF THIS WORK AND POST WITH WARNING LIGHTS. PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT AND OTHER HAZARDS CREATED BY EARTHWORK OPERATIONS.

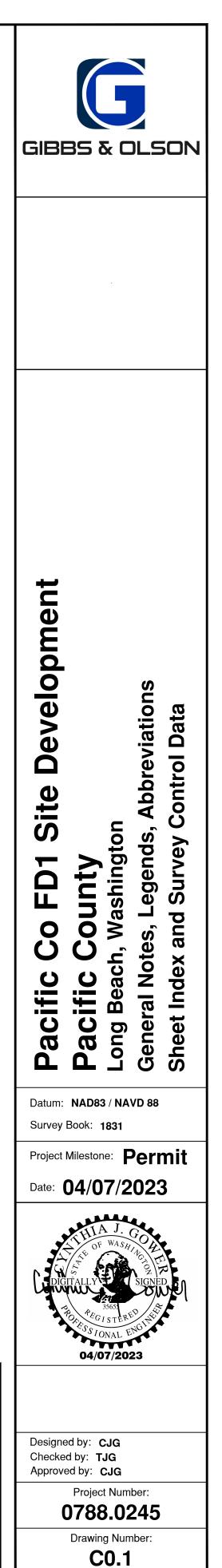
IF SITE PREPARATION ACTIVITIES CAUSE EXCESSIVE SUBGRADE DISTURBANCE, REPLACEMENT WITH IMPORTED STRUCTURAL FILL WILL BE NECESSARY, DISTURBANCE TO THE SUBGRADE SHOULD BE EXPECTED IF SITE PREPARATION AND EARTHWORK ARE CONDUCTED DURING PERIODS OF EXCESSIVE WET WEATHER AND/OR WHEN THE MOISTURE CONTENT OF THE SURFACE SOIL EXCEEDS OPTIMUM. IN ADDITION, ABANDONED UNDERGROUND PIPING AND UTILITIES THAT ARE ENCOUNTERED DURING GRADING SHALL BE EXCAVATED, STOCKPILED, AND HAULED OFF THE SITE BY THE CONTRACTOR. EXCEPT FOR TRENCH BACKFILL, COMPACTION OF ALL MATERIAL SHALL BE INCLUDED AS A PART OF THIS SECTION, SEE SURFACING FOR COMPACTION REQUIREMENTS.

6. ALL EXCAVATION SIDE SLOPES SHALL COMPLY WITH LOCAL, STATE AND FEDERAL CODES AND ORDINANCES HAVING JURISDICTION. SHORE AND BRACE WHERE SLOPING IS NOT POSSIBLE BECAUSE OF SPACE RESTRICTIONS OR STABILITY OF MATERIAL EXCAVATED. MAINTAIN SIDES AND SLOPES OF EXCAVATIONS IN SAFE CONDITION UNTIL COMPLETION OF BACKFILLING.

7. STOCKPILE SATISFACTORY EXCAVATED MATERIALS UNTIL REQUIRED FOR BACKFILL OR FILL. PLACE, GRADE AND SHAPE STOCKPILES FOR PROPER DRAINAGE. LOCATE AND RETAIN SOILS MATERIALS AWAY FROM EDGE OF EXCAVATIONS. DO NOT STORE WITHIN DRIP LINE OF TREES INDICATED TO REMAIN. COVER WITH IMPERMEABLE SHEETING FOR EROSION CONTROL. DISPOSE OF EXCESS SOIL MATERIAL AND WASTE MATERIALS AS HEREIN SPECIFIED.

8. PLACEMENT OF FILL AND COMPACTION SHALL BE DONE ACCORDING TO THE WSDOT SPECIFICATIONS AND THE GEOTECHNICAL REPORT. THE FILL MATERIAL SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT. STRUCTURAL FILLS SHOULD BE CONSIDERED TO INCLUDE SUBGRADE SOILS BENEATH FOUNDATIONS, SLABS, PAVEMENTS, AND OTHER AREAS INTENDED TO SUPPORT STRUCTURES OR WITHIN THE INFLUENCE ZONE OF STRUCTURES. EMBANKMENT CONSTRUCTION SHALL INCLUDE PREPARATION OF THE AREAS UPON WHICH EMBANKMENTS ARE PLACED, AND THE PLACEMENT AND COMPACTION OF APPROVED FILL MATERIAL. FILLS SHOULD ONLY BE PLACED OVER A SUBGRADE THAT HAS BEEN PREPARED IN CONFORMANCE WITH THE GEOTECHNICAL REPORT. IMPORT STRUCTURAL FILL MUST MEET THE REQUIREMENTS AS SPECIFIED IN THE GEOTECHNICAL REPORT.





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# **Project Specifications (cont)**

# **Excavation and Fill (cont)**

- 9. IN THE IMMEDIATE VICINITY OF CURBS, WALKS, DRIVEWAYS, INLETS, MANHOLES AND SIMILAR STRUCTURES, IN HOLES, AND WHERE EMBANKMENT AND FILL MATERIALS CANNOT BE REACHED BY THE NORMAL COMPACTING EQUIPMENT, THE CONTRACTOR SHALL COMPACT TO SPECIFIED DENSITY BY APPROVED METHODS.
- 10. CONTROL SOIL COMPACTION DURING CONSTRUCTION BY PROVIDING MINIMUM PERCENTAGE OF DENSITY SPECIFIED FOR COMPACTION OF SUBGRADE AND FILL FOR THE SITE, SEE SURFACING.
- 11. THE CONTRACTOR SHALL WATER OR DRY THE MATERIALS TO WITHIN 3% OF OPTIMUM MOISTURE AS DETERMINED BY THE MOISTURE DENSITY TEST FOR COMPACTION OF EMBANKMENTS, BACKFILLS AND SUBGRADES. EMBANKMENT OR BACKFILL MATERIALS SHALL NOT BE PLACED IN FINAL POSITION UNTIL MOISTURE IS WITHIN 3% OF OPTIMUM.
- 12. UNDER GRASSED OR LANDSCAPED AREAS, THE USE OF APPROVED NATIVE BACKFILL MATERIAL, SALVAGED TOPSOIL OR IMPORTED TOPSOIL MAY BE USED.
- 13. BACKFILL EXCAVATIONS AS PROMPTLY AS WORK PERMITS, BUT NOT UNTIL INSPECTION, TESTING, APPROVAL, AND RECORDING LOCATIONS OF UNDERGROUND UTILITIES HAS BEEN COMPLETED.
- 14. BACKFILL EXCAVATIONS AS PROMPTLY AS WORK PERMITS, BUT NOT UNTIL INSPECTION, TESTING, APPROVAL, AND RECORDING LOCATIONS OF UNDERGROUND UTILITIES HAS BEEN COMPLETED.
- 15. UNIFORMLY GRADE AREAS WITHIN LIMITS OF GRADING UNDER THIS SECTION, INCLUDING ADJACENT TRANSITION AREAS. SMOOTH FINISHED SURFACE WITHIN SPECIFIED TOLERANCES. COMPACT WITH UNIFORM LEVELS OR SLOPES BETWEEN POINTS WHERE ELEVATIONS ARE INDICATED, OR BETWEEN SUCH POINTS AND EXISTING GRADES.
- 16. GRADE THE SURFACE OR FILL UNDER STRUCTURAL SLABS SMOOTH AND EVEN, FREE OF VOIDS. COMPACTED AS SPECIFIED, AND TO REQUIRED ELEVATION. PROVIDE FINAL GRADES WITHIN A TOLERANCE OF A HALF-INCH WHEN TESTED WITH A TEN-FOOT STRAIGHTEDGE.
- 17. FINISH SURFACES SHALL BE FREE FROM IRREGULAR SURFACE CHANGES. GRADE AREAS ADJACENT TO STRUCTURE LINES TO DRAIN AWAY FROM STRUCTURES AND TO PREVENT PONDING. FOR WALKWAYS, SHAPE SURFACE OF AREAS UNDER WALKS TO LINE, GRADE AND CROSS-SECTION, WITH FINISH SURFACE NOT MORE THAN 0.05' ABOVE OR BELOW REQUIRED SUBGRADE, FOR PAVEMENT AREA OR PADS, SHAPE SURFACE OF AREAS UNDER PAVEMENT TO LINE, GRADE AND CROSS-SECTION, WITH FINISH SURFACE NOT MORE THAN A HALF-INCH ABOVE OR BELOW REQUIRED SUBGRADE ELEVATIONS.
- 18. FOR QUALITY CONTROL TESTING DURING CONSTRUCTION, ALLOW TESTING SERVICE TO INSPECT AND APPROVE SUBGRADES AND FILL LAYERS BEFORE FURTHER CONSTRUCTION WORK IS PERFORMED. TESTING IS AT OWNER'S DISCRETION.

## 19. FOR FINISHED GRADING:

- a. PROTECT NEWLY GRADED AREAS FROM TRAFFIC AND EROSION. KEEP FREE OF TRASH AND DEBRIS. REPAIR AND RE-ESTABLISH GRADES IN SETTLED, ERODED, AND RUTTED AREAS TO SPECIFIED TOLERANCES.
- b. WHERE COMPLETED COMPACTED AREAS ARE DISTURBED BY SUBSEQUENT CONSTRUCTION OPERATIONS OR ADVERSE WEATHER, SCARIFY SURFACE, RE-SHAPE, AND COMPACT TO REQUIRED DENSITY PRIOR TO FURTHER CONSTRUCTION.
- c. WHERE SETTLING IS MEASURABLE OR OBSERVABLE AT EXCAVATED AREAS DURING GENERAL PROJECT WARRANTY PERIOD, REMOVE SURFACE (PAVEMENT, LAWN OR OTHER FINISH), ADD BACKFILL MATERIAL, COMPACT, AND REPLACE SURFACE TREATMENT. RESTORE APPEARANCE, QUALITY, AND CONDITION OF SURFACE OR FINISH TO MATCH ADJACENT WORK AND ELIMINATE EVIDENCE OF RESTORATION TO GREATEST EXTENT POSSIBLE.
- 20. SITE GRADING INCLUDES ALL WORK TO PREPARE FINISHED GROUND AS DEPICTED ON PLANS, INCLUDING SWALES AND PONDS.
- 21. ALL IMPORT FILL SHALL COMPLY WITH COMMON BORROW SECTION 9-03.14(3) OF THE WSDOT SPECIFICATIONS.

# Removal and Replacement of Unsuitable Materials

- WHATEVER EXCAVATION ACTIVITIES EXPOSES PEAT, SOFT CLAY, QUICKSAND, DEBRIS, OR OTHER UNSUITABLE FOUNDATION MATERIAL, SUCH MATERIAL SHALL BE REMOVED TO THE DEPTH DIRECTED BY ENGINEER AND BACKFILLED WITH SUITABLE APPROVED FOUNDATION MATERIAL.
- 2. UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE SITE AND HAULED TO AN APPROVED PERMITTED WASTE SITE OBTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL FURNISH AND PLACE SUITABLE MATERIALS MEETING THE REQUIREMENTS OF THE STANDARD SPECIFICATION.
- TREE STUMPS LOCATED WITHIN THE PROPOSED GRAVEL SECTION SHALL BE REMOVED OR GROUND OUT AND RESULTANT VOID REPLACED WITH CRUSHED SURFACING BASE COURSE (CSBC) COMPACTED TO 95% OF MAXIMUM DRY DENSITY PER ASTM D1567.

# Trenching and Backfill

- . TRENCHING AND BACKFILL SHALL COMPLY WITH SECTION 7-08 OF THE WSDOT SPECIFICATIONS.
- 2. WORK COVERED BY THIS SECTION CONSISTS OF TRENCH EXCAVATION, BEDDING PIPE WITH IMPORTED MATERIAL, AND BACKFILLING WITH IMPORTED MATERIALS FOR ALL PIPELINES AS SHOWN ON THE DRAWINGS.
- QUALITY CONTROL MONITORING OF SUBGRADE BACKFILL AND EMBANKMENT MATERIALS AND CONSTRUCTION WITHIN PUBLIC RIGHT OF WAY BY CERTIFIED INDEPENDENT LABORATORY APPROVED, SECURED AND PAID FOR BY THE OWNER.
- . CONTRACTOR SHALL PROVIDE:
  - a. A SAMPLE OF EACH IMPORT MATERIAL FOR GRADATION AND MOISTURE DENSITY COMPACTION CURVE TEST REPORTS.
  - b. CERTIFICATION OF GRADATION AND COMPLIANCE WITH REFERENCED STANDARDS AND MOISTURE DENSITY STANDARD TEST REPORTS.
  - c. IF AT ANY TIME THE CONTRACTOR CHANGES THE SOURCE AND/OR STOCKPILE FROM WHICH MATERIALS ARE OBTAINED, SAMPLES AND CERTIFICATIONS OF GRADATION FOR THESE NEW SOURCES WILL BE SUBMITTED AT NO ADDITIONAL COST TO THE OWNER.
  - d. DURING CONSTRUCTION, TESTING WILL BE AT THE EXPENSE OF THE OWNER, AND THE CONTRACTOR SHALL PROVIDE MATERIAL SAMPLES AS MAY BE NECESSARY TO COMPLETE THIS TESTING. THESE MATERIAL SAMPLES WILL BE FURNISHED FROM MATERIAL AVAILABLE ON THE JOB SITE OR FROM THE CONTRACTOR'S SOURCE AND/OR SUPPLIER.
- MATERIALS PROPOSED FOR USE IN THE WORK SHALL MEET THE REQUIREMENTS OF SECTION 7-08,3 OF THE WSDOT SPECIFICATIONS. NATIVE MATERIALS SHALL NOT BE USED FOR TRENCH BEDDING, PIPE ZONE OR BACKFILL MATERIAL

- ON THE APPROVED DRAWINGS.
- DRAWINGS OR THE ENGINEER DIRECT OTHERWISE.
- RESPONSIBILITY OF THE CONTRACTOR.
- BE STOCKPILED AND REUSED ON-SITE.

## Dewatering

LOCATION.

## Storm Drainage Utilities

- BACKFILL MATERIAL IS PROHIBITED.
- COUPLING OR ON THE PIPE BY THE MANUFACTURER.
- 3. CATCH BASINS SHALL BE AS SHOWN ON THE APPROVED DRAWINGS.
- CONTROL DETAIL ON THE DRAWINGS.

- SAGS.
- 8. LEAVE PIPING SYSTEMS AND STRUCTURES CLEAN OF DEBRIS AND OBSTRUCTIONS.

# Aggregate Base Courses

- SUBBASE IN ACCORDANCE WITH WSDOT SPECIFICATIONS.
- 3 AND IMPORT FILL PER THE SPECIFICATIONS OR DRAWINGS.
- SECTIONS SHALL BE COMPACTED TO 95%.
- DENSITY (ASTM D1557).
- GEOTECHNICAL REPORT PRIOR TO PLACEMENT OF STRUCTURAL FILL.

# Fencing

- 1. CHAIN LINK FENCE MATERIALS SHALL BE SPECIFIED AS BELOW:
  - ONE-PIECE FABRIC WIDTHS FOR ALL FENCING.
  - DRAWINGS.
  - OUNCES OF ZINC PER SQUARE FOOT OF SURFACE AREA.
  - SHALL BE IN CONFORMANCE WITH ASTM A 153.

7. THE CONTRACTOR SHALL POTHOLE TO VERIFY THE LOCATION AND DEPTH OF THE EXISTING WATER LINE, SANITARY SEWER LINE, STORM DRAIN PIPING, GAS LINE AND ALL OTHER UTILITIES THAT MAY CONFLICT WITH THE WATER OR STORM SYSTEM PRIOR TO STARTING WORK AS SHOWN

8. IN GENERAL, THE OPEN TRENCH LENGTH SHALL NOT EXCEED 100 FEET. ALL TRENCHES SHALL BE COVERED WITH SUITABLE METAL SHEETING AT THE END OF THE WORKDAY. ALL MATERIAL EXCAVATED FROM TRENCHES AND PILED ADJACENT TO THE TRENCH SHALL BE PILED AND MAINTAINED SO THAT THE TOE OF THE SLOPE IS AT LEAST TWO FEET FROM THE EDGE OF THE TRENCH. IT SHALL BE PILED TO CAUSE A MINIMUM OF INCONVENIENCE TO PUBLIC TRAVEL, AND PROVISIONS SHALL BE MADE FOR MERGING TRAFFIC WHERE NECESSARY. FREE ACCESS SHALL BE PROVIDED TO ALL FIRE HYDRANTS, WATER VALVES, AND METERS. CLEARANCE SHALL BE LEFT TO ENABLE FREE FLOW OF STORM WATER IN GUTTERS, CONDUITS, OR NATURAL WATERCOURSES.

9. UPON COMPLETING THE WORK, THE CONTRACTOR SHALL REMOVE ALL SHORING UNLESS THE

10. DAMAGES RESULTING FROM IMPROPER SHORING OR FAILURE TO SHORE SHALL BE THE SOLE

11. WHERE TRENCHES CROSS LAWNS, GARDEN AREAS, OR OTHER AREAS ON WHICH REASONABLE TOPSOIL CONDITIONS EXIST, THE CONTRACTOR SHALL REMOVE THE TOPSOIL TO A DEPTH OF 6 INCHES. IF TOPSOIL IS SUITABLE FOR LANDSCAPING, PER THE LANDSCAPE ARCHITECT, IT SHALL

1. FOUNDATIONS, UTILITY TRENCHES, AND ALL OTHER PARTS OF THE CONSTRUCTION SITE SHALL BE DEWATERED AND KEPT FREE OF STANDING WATER AND MUDDY CONDITIONS AS NECESSARY FOR THE PROPER EXECUTION OF THE WORK. THE CONTRACTOR SHALL FURNISH, INSTALL, OPERATE, AND MAINTAIN ALL DRAINS, SUMPS, AND OTHER EQUIPMENT REQUIRED TO PROPERLY DEWATER THE SITE AS SPECIFIED. DEWATERING SYSTEMS THAT CAUSE A LOSS OF SOIL FINE FROM FOUNDATIONS AREAS WILL NOT BE PERMITTED. WATER SHALL BE DISCHARGED TO AN APPROVED

 STORM SEWER UTILITIES SHALL COMPLY WITH SECTION 7-04 OF THE WSDOT SPECIFICATIONS. INSTALLATION OF STORM SEWER GRAVITY PIPE AND FITTINGS SHALL BE IN ACCORDANCE WITH THE SLOPE AND INVERT ELEVATIONS AS SHOWN ON THE DRAWINGS. WATER SETTLING OF

2. STORM DRAIN PIPING AS SHOWN ON THE DRAWINGS, SHALL BE REINFORCED CONCRETE STORM SEWER PIPE PER SECTION 9-05.7(2) OF THE WSDOT SPECIFICATIONS. JOINTS SHALL BE MADE WITH A BELL AND SPIGOT COUPLING AND SHALL INCORPORATE THE USE OF A GASKET CONFORMING TO THE REQUIREMENTS OF ASTM F 477. ALL GASKETS SHALL BE FACTORY INSTALLED ON THE

4. FLOW CONTROL STRUCTURES SHALL BE PER THE WSDOT STD PLAN B-15.60-02 AND THE FLOW

5. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

6. TRENCH EXCAVATION AND BACKFILLING FOR STORM DRAINAGE UTILITIES INSTALLATION SHALL BE AS SPECIFIED IN TRENCHING AND BACKFILL SECTION AND AS SHOWN ON THE DRAWINGS.

7. ALL PIPES SHALL BE CONTINUOUSLY SLOPED TO GRADES INDICATED WITHOUT HIGH POINTS OR

1. AGGREGATE BASE COURSES SHALL COMPLY WITH SECTION 4-04 OF THE WSDOT SPECIFICATIONS.

2. THIS WORK CONSISTS OF FURNISHING, PLACING, AND COMPACTING ONE OR MORE COURSES OF IMPORT AGGREGATES, AS FILL, BACKFILL, SUBBASE OR BASE, ON AN APPROVED SUBGRADE OR

WORK COVERED BY THIS SECTION INCLUDES, BUT IS NOT LIMITED TO FURNISHING, HAULING, PLACING AND COMPACTING IMPORTED AGGREGATE CRUSHED SURFACING TOP COURSE (CSTC), CRUSHED SURFACING BASE COURSE (CSBC), FOUNDATION MATERIAL, QUARRY SPALL MATERIAL

4. IMPORTED CRUSHED SURFACING TOP COURSE (CSTC) AND CRUSHED SURFACING BASE COURSE (CSBC) SHALL CONFORM TO STANDARD SPECIFICATION SECTION 9-03.9(3). QUARRY SPALLS SHALL BE PER STANDARD SPECIFICATION SECTION 9-13.1(5), CRUSHED SURFACING FOR STRUCTURAL

5. IMPORT STRUCTURAL FILL SHALL BE CONSIDERED THE FILL WITHIN THE PROJECT SITE AND WILL CONSIST OF GRANULAR FILL MEETING THE WSDOT SPECIFICATION FOR GRAVEL BORROW, SECTION 9-03.14(1). STRUCTURAL FILL WILL BE COMPACTED TO 95% OF THE MAXIMUM DRY

6. EXISTING GROUND AND FILL MATERIAL SHALL MEET REQUIREMENTS FOR COMPACTION PER THE

a. STEEL FENCING FABRIC: SHALL BE NO.9 GAUGE (0.148" ± 0.005") GALVANIZED STEEL WIRES, 2-INCH MESH, WITH BOTH TOP AND BOTTOM SELVAGES TWISTED AND BARBED. FURNISH

b. FABRIC FINISH: BLACK BONDED VINYL WITH FENCE INSERTS / SLATS WHERE SHOWN IN THE

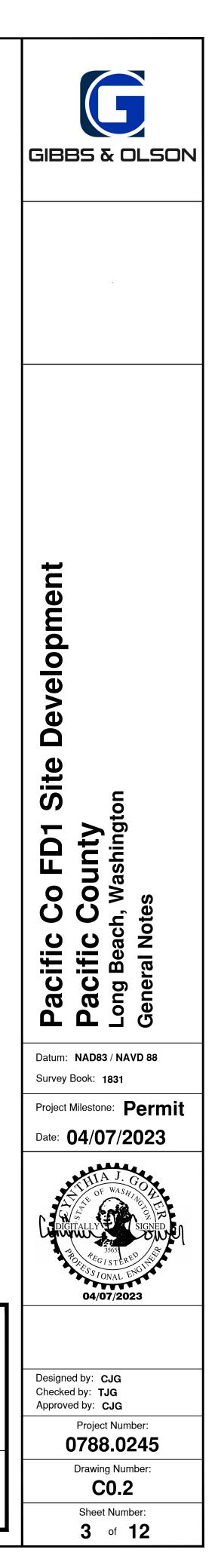
c. STEEL FRAMEWORK: SHALL BE GALVANIZED STEEL PER ASTM F1083, WITH A MINIMUM OF 2.0

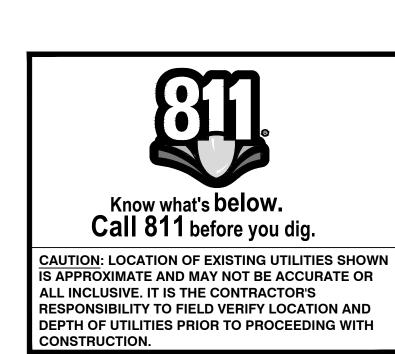
d. FITTINGS AND ACCESSORIES: ALL FITTINGS AND MISCELLANEOUS HARDWARE SHALL BE PRESSED STEEL OR MALLEABLE IRON AND SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM F 626. GALVANIZING OF MISCELLANEOUS FITTINGS NOT COVERED BY ASTM F 626

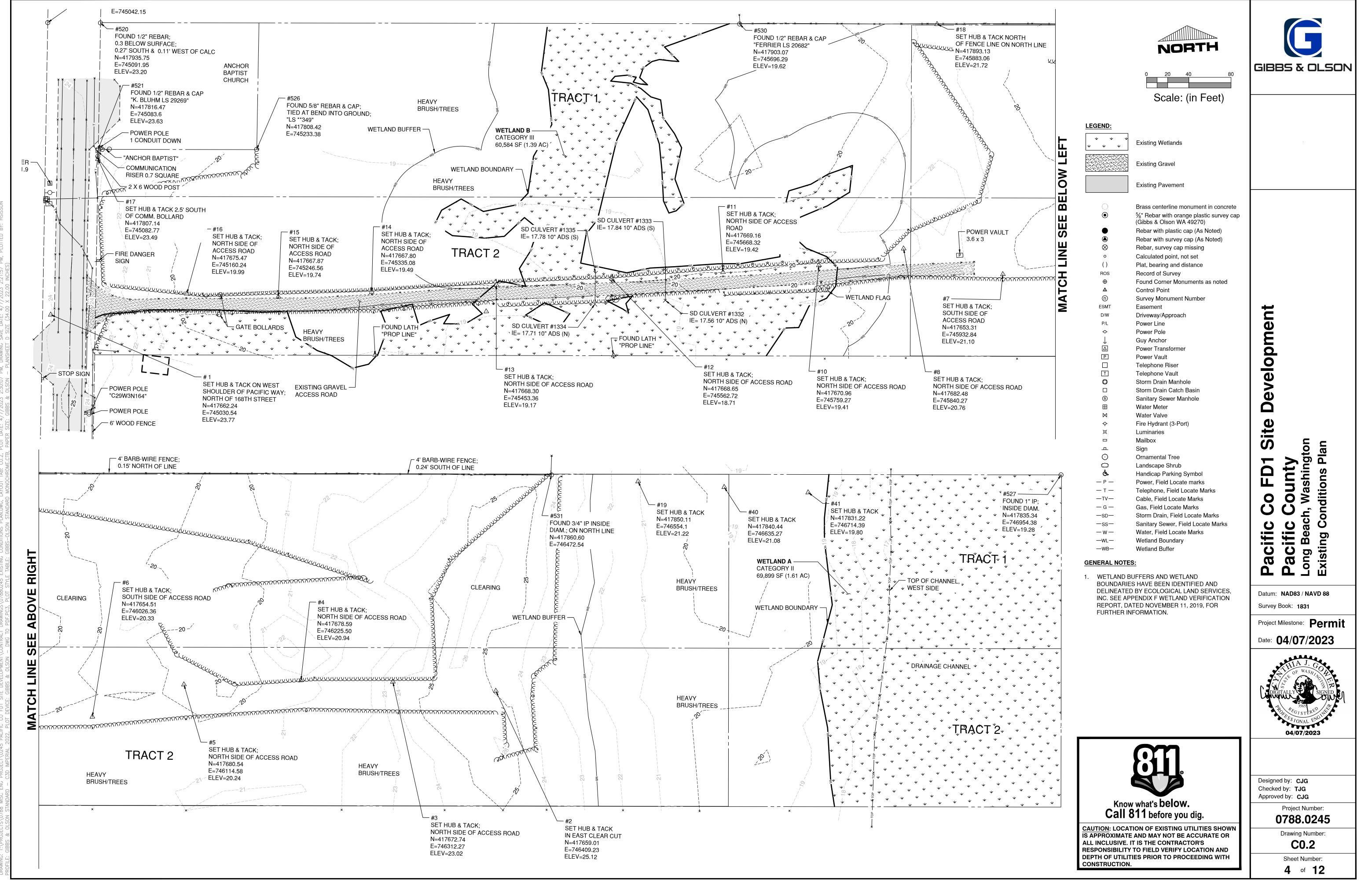
- e. END, CORNER AND PULL POSTS: ALL TERMINAL POSTS SHALL BE TUBULAR 2-7/8" O.D. GALVANIZED STEEL PIPE, 5.79 POUNDS PER LINEAR FOOT.
- f. LINE POSTS: ALL LINE POSTS SHALL BE SPACED AT AN EQUAL SPACING, WITH MAXIMUM SPACING OF 10-FEET, AND SHALL BE TUBULAR 2-3/8" O.D. GALVANIZED STEEL PIPE, 3.65 POUNDS PER LINEAR FOOT.
- g. GATE POSTS: FURNISH POSTS REQUIRED FOR SUPPORTING NOMINAL GATE WIDTHS AS SHOWN ON DRAWINGS
- h. TOP AND BRACE RAILS: RAILS SHALL BE 1-5/8" O.D. GALVANIZED STEEL PIPE, 2.27 POUNDS PER LINEAR FOOT.
- i. TENSION WIRE: 7-GAUGE, COIL SPRING WIRE, METAL AND FINISH TO MATCH FABRIC. LOCATE AT BOTTOM OF FABRIC.
- j. WIRE TIES: 9-GAUGE WIRE, METAL AND FINISH TO MATCH FABRIC.
- k. POST BRACE ASSEMBLY: MANUFACTURER'S STANDARD ADJUSTABLE BRACE AT END AND GATE POSTS AND AT BOTH SIDES OF CORNER AND PULL POSTS. WITH HORIZONTAL BRACE LOCATED AT MID-HEIGHT OF FABRIC. USE SAME MATERIAL AS TOP RAIL FOR BRACE, AND TRUSS TO LINE POSTS WITH 3/8-INCH DIAMETER ROD AND ADJUSTABLE TIGHTENER.
- I. POST TOPS: PROVIDE WEATHER TIGHT CLOSURE CAP WITH LOOP TO RECEIVE TENSION WIRE OR TOP RAIL; ONE CAP FOR EACH POST.
- m.STRETCHER BARS: ONE-PIECE LENGTHS EQUAL TO FULL HEIGHT OF FABRIC, WITH MINIMUM CROSS-SECTION OF 3/16" X 3/4". PROVIDE ONE STRETCHER BAR FOR EACH GATE AND END POST, AND TWO FOR EACH CORNER AND PULL POST.
- n. STRETCHER BAR BANDS: MAXIMUM SPACING 15-INCHES O.C., TO SECURE STRETCHER BARS TO END, CORNER, PULL, AND GATE POSTS.
- o. FINISH: ALL FRAMING AND ACCESSORIES SHALL BE FINISHED IN BLACK BONDED VINYL.
- p. INSERTS / SLATS: THE FENCES AND GATES SHALL INCLUDE INDUSTRIAL GRADE HDPE SLATS MEETING ASTM F3000/F3000M, COLORED BLACK AS FOLLOWS:
- p.1. FENCE FRONTING HOWARD WAY
- p.2. FENCE FRONTING ORCHARD WAY PRIVATE ROAD
- GATE MATERIALS SHALL BE AS SPECIFIED BELOW:
  - a. FABRICATION: FABRICATE PERIMETER FRAMES OF GATES FROM METAL AND FINISH TO MATCH FENCE FRAMEWORK. ASSEMBLE GATE FRAMES BY WELDING OR WITH SPECIAL FITTINGS AND RIVETS FOR RIGID CONNECTIONS, PROVIDING SECURITY AGAINST REMOVAL OR BREAKAGE CONNECTIONS. PROVIDE HORIZONTAL AND VERTICAL MEMBERS TO ENSURE PROPER GATE OPERATION AND ATTACHMENT OF FABRIC, HARDWARE AND ACCESSORIES. SPACE FRAME MEMBERS MAXIMUM OF 8' APART UNLESS OTHERWISE INDICATED.
  - a.1. PROVIDE SAME FABRIC AS FOR FENCE. INSTALL FABRIC WITH STRETCHER BARS AT VERTICAL EDGES AND AT TOP AND BOTTOM EDGES. ATTACH STRETCHER BARS TO GATE FRAME AT NOT MORE THAN 15 INCHES O.C.
  - a.2. INSTALL DIAGONAL CROSS-BRACING CONSISTING OF 3/8" DIAMETER ADJUSTABLE LENGTH TRUSS RODS ON GATES TO ENSURE FRAME RIGIDITY WITHOUT SAG OR TWIST.
  - b. SWING GATES: FABRICATE PERIMETER FRAMES OF MINIMUM 1-7/8" O.D. PIPE.

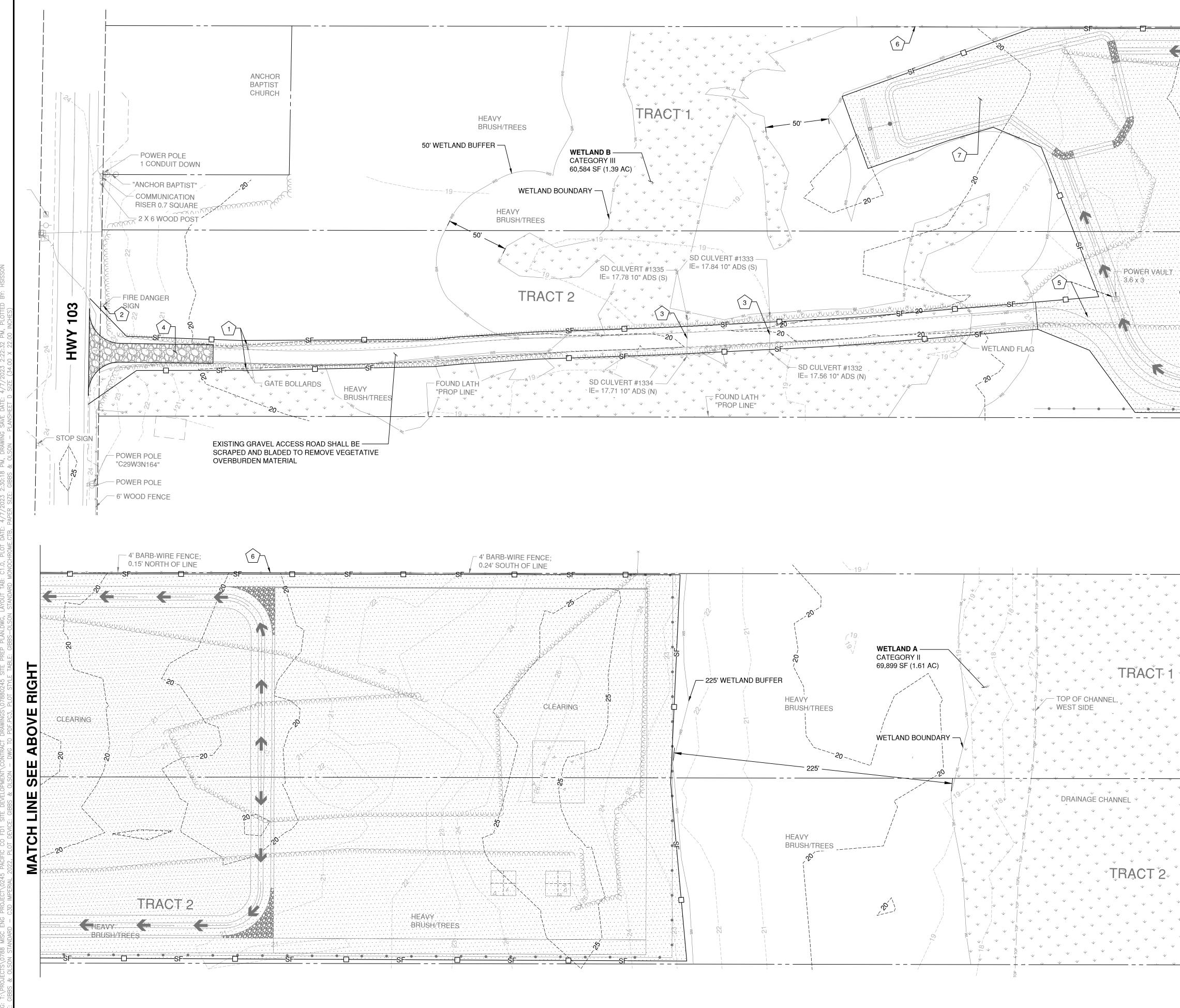
c. GATE HARDWARE: PROVIDE HARDWARE AND ACCESSORIES FOR EACH GATE, GALVANIZED PER ASTM A 153, AND IN ACCORDANCE WITH THE FOLLOWING:

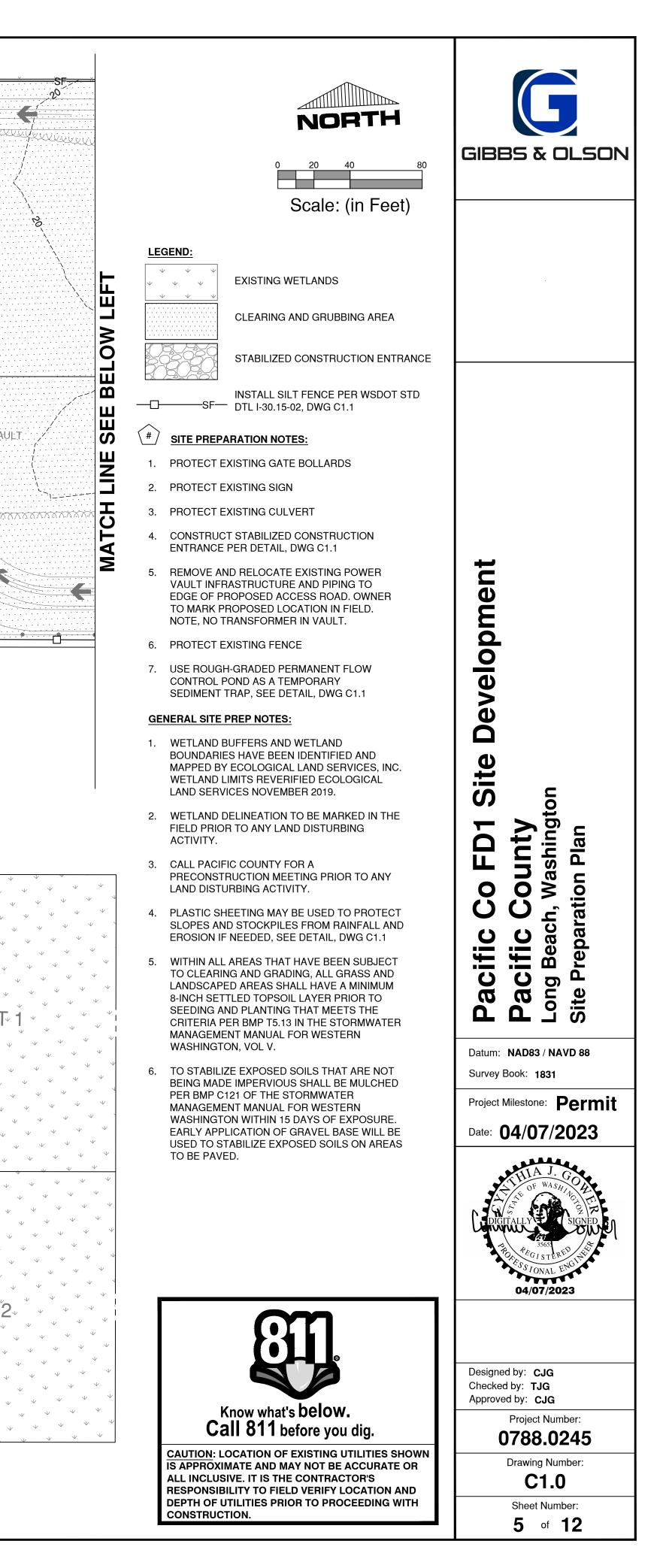
- c.1. HINGES: SIZE AND MATERIAL TO SUIT GATE SIZE, NON-LIFT-OFF TYPE, OFFSET TO PERMIT 180 DEGREE GATE OPENING. PROVIDE 1-1/2 PAIR OF HINGES FOR EACH LEAF OVER SIX FEET NOMINAL HEIGHT.
- c.2. LATCH: FORKED TYPE OR PLUNGER-BAR TYPE TO PERMIT OPERATION FROM EITHER SIDE OF GATE, WITH PADLOCK EYE AS INTEGRAL PART OF LATCH.
- c.3. KEEPER: PROVIDE KEEPER FOR VEHICLE GATES, WHICH AUTOMATICALLY ENGAGES GATE LEAF AND HOLDS IT IN OPEN POSITION UNTIL MANUALLY RELEASED.
- c.4. DOUBLE GATES: PROVIDE GATE STOPS FOR DOUBLE GATES, CONSISTING OF MUSHROOM TYPE FLUSH PLATE WITH ANCHORS, SET IN CONCRETE, AND DESIGNED TO ENGAGE CENTER DROP ROD OR PLUNGER BAR. INCLUDE LOCKING DEVICE AND PADLOCK EYES AS INTEGRAL PART OF LATCH, PERMITTING BOTH GATE LEAVES TO BE LOCKED WITH SINGLE PADLOCK.
- 3. CHAIN LINK FENCE INSTALLATION:
  - j. SETTING POSTS: CENTER AND ALIGN POSTS TO REQUIRED HEIGHT DURING ASSOCIATED WORK OF PLACING CONCRETE. ALL POSTS SHALL BE SET IN 3,000 PSI (MINIMUM) CONCRETE POSTS SHALL HAVE A MAXIMUM SPACING OF 10 FEET. ALL CONCRETE POST FOOTINGS SHALL BE 10-INCH MINIMUM DIAMETER, A MINIMUM OF 3 FEET DEEP, AND SHALL BE CROWNED AT THE TOP. PLACE CONCRETE AROUND POSTS AND VIBRATE OR TAMP FOR CONSOLIDATION. CHECK EACH POST FOR VERTICAL AND TOP ALIGNMENT, AND HOLD IN POSITION DURING PLACEMENT AND FINISHING OPERATIONS.
  - k. TOP RAILS: RUN RAIL CONTINUOUSLY THROUGH POST CAPS. PROVIDE EXPANSION COUPLINGS AT RAIL TRANSITIONS.
  - I. CENTER RAILS: PROVIDE CENTER RAILS WHERE RECOMMENDED BY MANUFACTURER. INSTALL IN ONE PIECE BETWEEN POSTS AND FLUSH WITH POST ON FABRIC SIDE, USING SPECIAL OFFSET FITTINGS WHERE NECESSARY.
  - m. BRACE ASSEMBLIES: INSTALL BRACES SO POSTS ARE PLUMB WHEN DIAGONAL ROD IS UNDER PROPER TENSION.
  - n. TENSION WIRE: INSTALL TENSION WIRES BEFORE STRETCHING FABRIC AND TIE TO EACH POST WITH NOT LESS THAN 6-GAUGE GALVANIZED WIRE. FASTEN FABRIC TO TENSION WIRE USING 11-GAUGE GALVANIZED STEEL HOG RINGS SPACED 24 INCHES O.C.
  - o. FABRIC: LEAVE APPROXIMATELY TWO INCHES BETWEEN FINISH GRADE AND BOTTOM SELVAGE, UNLESS OTHERWISE INDICATED. PULL FABRIC TAUT AND TIE TO POSTS, RAILS, AND TENSION WIRES. INSTALL FABRIC ON SECURITY SIDE OF FENCE, AND ANCHOR TO FRAMEWORK SO THAT FABRIC REMAINS IN TENSION AFTER PULLING FORCE IS RELEASED.
  - p. STRETCHER BARS: THREAD THROUGH OR CLAMP TO FABRIC FOUR INCHES O.C., AND SECURE TO POSTS WITH METAL BANDS SPACED 15 INCHES O.C.
  - q. GATES: INSTALL GATES PLUMB, LEVEL, AND SECURE FOR FULL OPENING WITHOUT INTERFERENCE. INSTALL GROUND-SET ITEMS IN CONCRETE FOR ANCHORAGE. ADJUST HARDWARE FOR SMOOTH OPERATION AND LUBRICATE WHERE NECESSARY. INSTALL THE GATES TO A LEAVE A MAXIMUM OF 2-INCHES BETWEEN THE BOTTOM OF THE GATE AND FINISH ELEVATION.
  - r. TIE WIRES: USE U-SHAPED WIRE, CONFORMING TO DIAMETER OF PIPE TO WHICH ATTACHED, CLASPING PIPE AND FABRIC FIRMLY WITH ENDS TWISTED AT LEAST TWO FULL TURNS. BEND ENDS OF WIRE TO MINIMIZE HAZARD TO PERSONS OR CLOTHING.
  - s. TIE FABRIC TO LINE POSTS, WITH WIRE TIES SPACED 12 INCHES O.C. TIE FABRIC TO RAILS AND BRACES, WITH WIRE TIES SPACED 24 INCHES O.C. TIE FABRIC TO TENSION WIRES, WITH HOG RINGS SPACED 24 INCHES O.C.
  - t. ATTACH FABRIC TO TERMINALS WITH 10-GAUGE LOCK LOOPS SPACED EVERY 3.3 INCHES. THE FABRIC SHALL BE WOVEN THROUGH THE LOCK LOOPS TO PROVIDE EXTRA STRENGTH.
  - u. FASTENERS: INSTALL NUTS FOR TENSION BANDS AND HARDWARE BOLTS ON SIDE OF FENCE OPPOSITE FABRIC SIDE. PEEN ENDS OF BOLTS OR SCORE THREADS TO PREVENT REMOVAL OF NUTS.

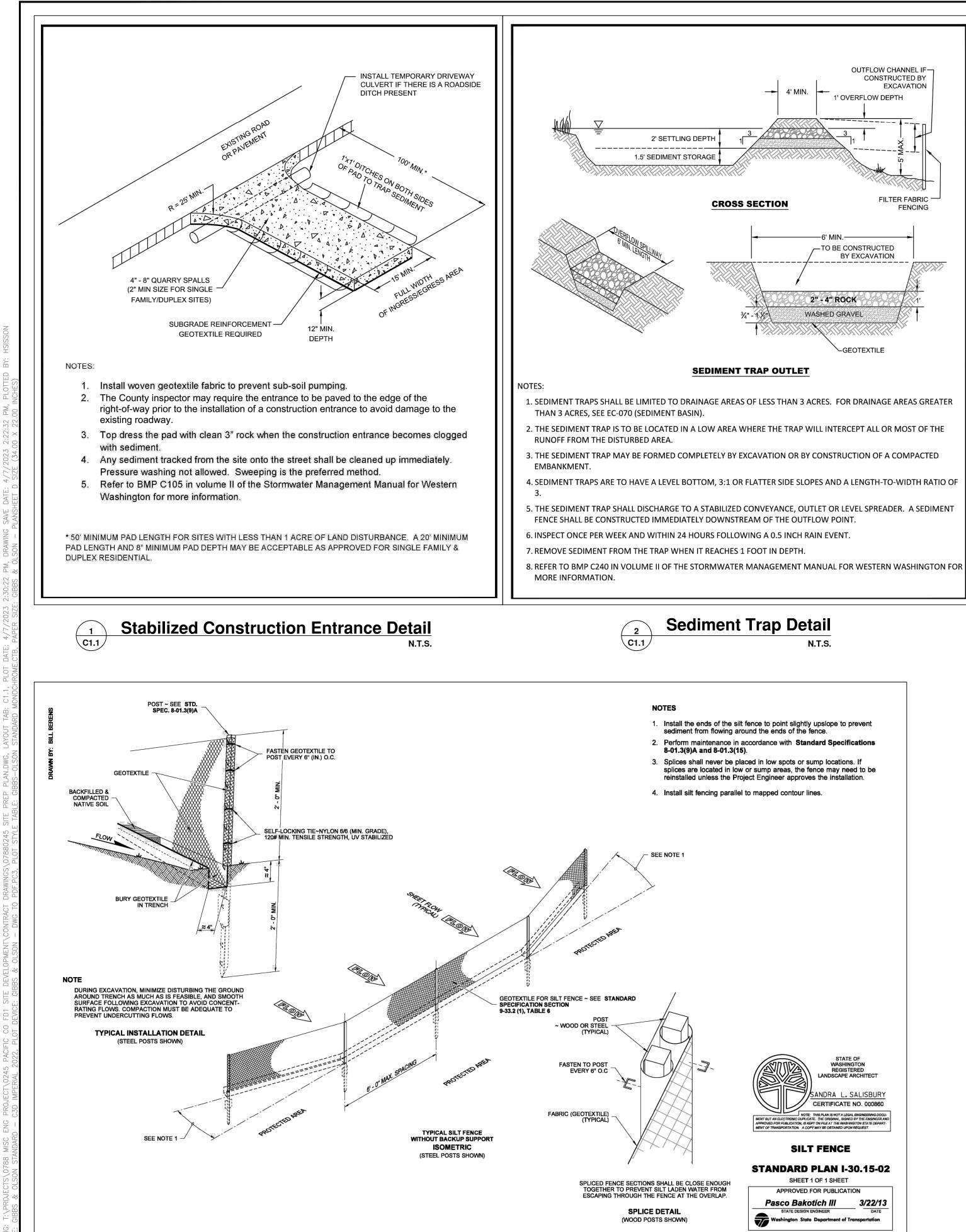












(Earthen Berm shown) Toe of slope verlap sheets 2' — 4 ear Sediment Barrier..... rthen Berm shown) PERSPECTIVE SECTION TEMPORARY COVER ON SLOPE – Anchor Restrainer (Gravel—filled bags shown) Temporary sheeting Secure fabric with anchor restrainers Toe of slope Embed sheeting at toe of stockpile — Edge └── 8' Typical Linear Sediment Barrier (Earthen Bearm shown) TEMPORARY COVER ON STOCKPILE NOTES: 1. PLASTIC SHEETING IS USED TO PROVIDE IMMEDIATE PROTECTION TO SLOPES AND STOCKPILES FROM RAINFALL AND EROSION. 2. OVERLAP SEAMS 2'-4'. TAPE, ROLL AND STAKE THE SEAMS. 3. ANCHOR THE COVERING/SHEETING USING SANDBAGS OR OTHER SUITABLE TETHERED ANCHOR SYSTEM SPACED ON A 10' GRID SPACING IN ALL DIRECTIONS. 4. INSTALL A GRAVEL BERM, RIPRAP, OR OTHER SUITABLE SEDIMENT BARRIER AT THE TOE OF THE SLOPE OR STOCKPILE. PROVIDE ENERGY DISSIPATION AT TOE WHEN NEEDED. 5. SLOPE APPLICATION: INSTALL AN INTERCEPTOR DIKE AT THE TOP OF THE PLASTIC TO DIVERT RUNOFF AWAY FROM PLASTIC SHEETING-ALLOW NO WATER TO GO UNDER THE SHEETING. ANCHOR MATERIAL AT THE TOP OF SLOPE IN A 6"X6" TRENCH. DO NOT USE PLASTIC COVERING UPSLOPE OF AREAS SUCH AS STEEP AND/OR UNSTABLE SLOPES THAT MIGHT BE ADVERSELY AFFECTED BY INCREASED OR CONCENTRATED RUNOFF

Top of slope

Secure fabric with

Temporary sheeting Secure with anchor restrainers.

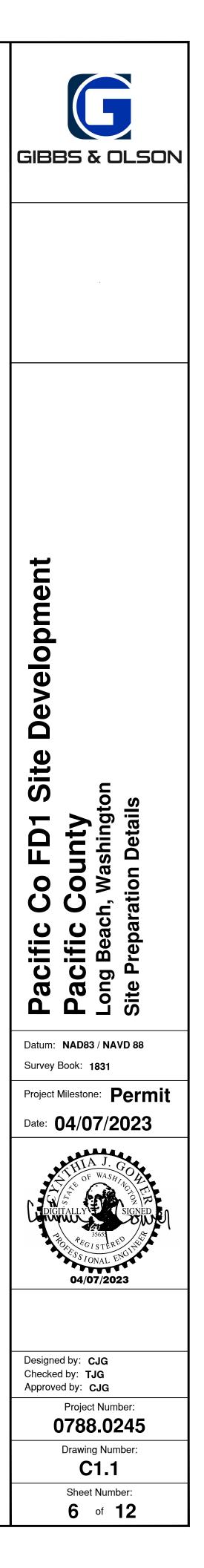
Anchor Trench-

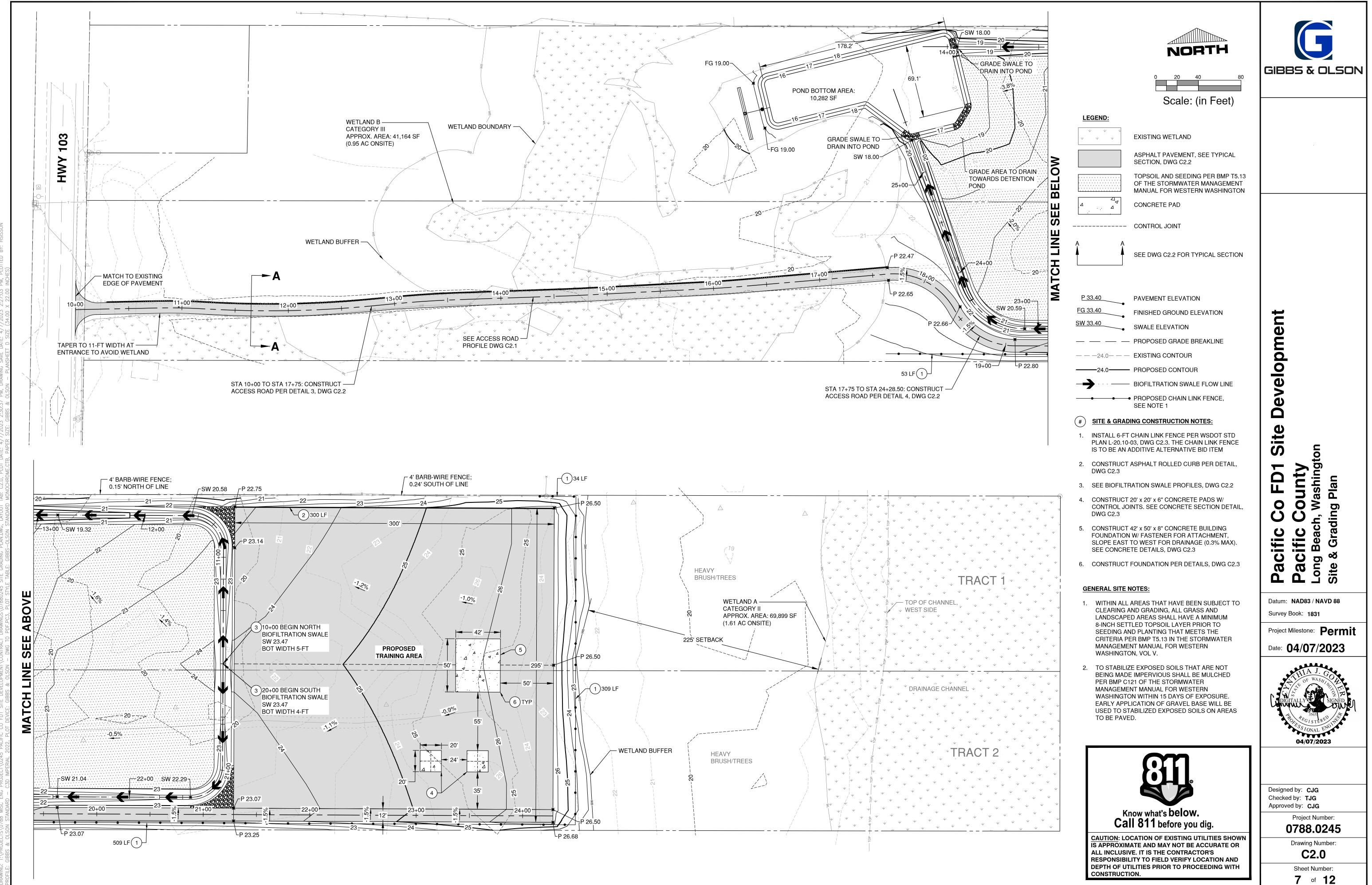
Anchor Retrainer (Gravel-filled bags shown)—

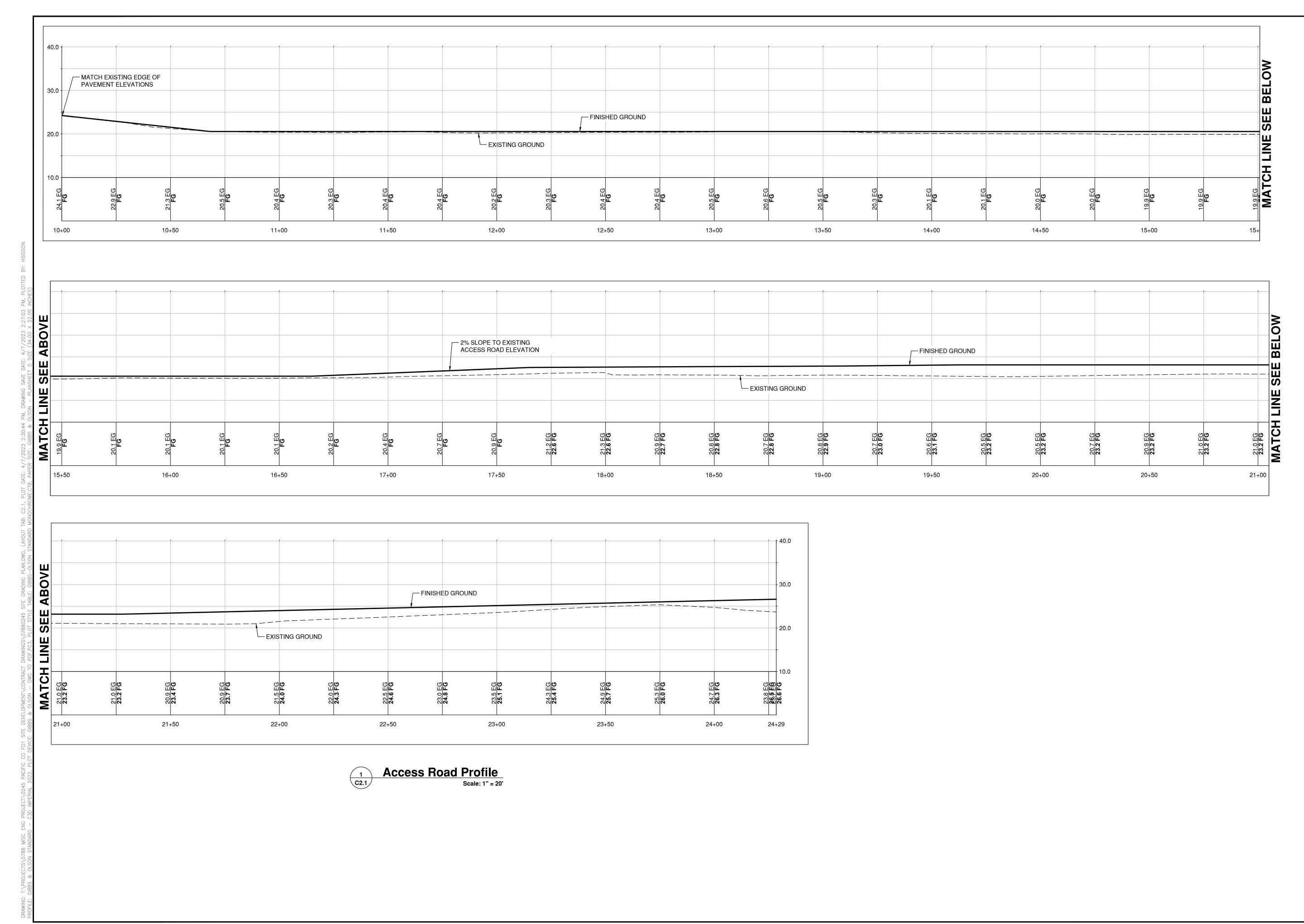
r Sediment Barrie

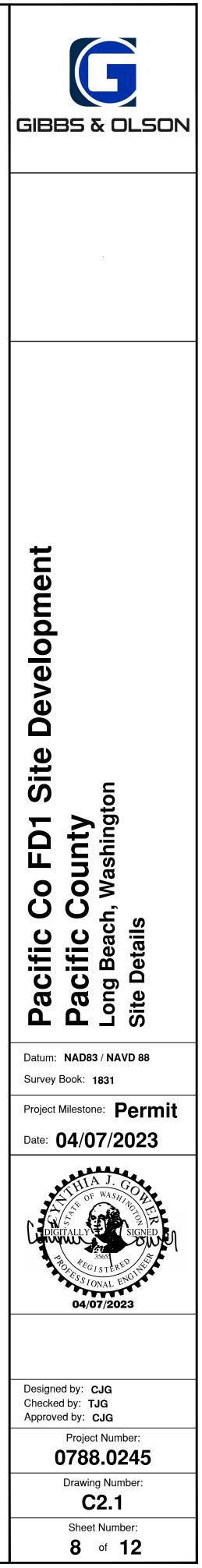
- 6. INSPECT ONCE PER WEEK AND WITHIN 24 HOURS FOLLOWING A 0.5 INCH RAIN EVENT. REPLACE TORN SHEETS AND REPAIR OPEN SEAMS. COMPLETELY REPLACE PLASTIC WHEN IT BEGINS TO DETERIORATE.
- 7. REFER TO BMP C123 IN VOLUME II OF THE STORMWATER MANUAL FOR WESTERN WASHINGTON FOR MORE INFORMATION.

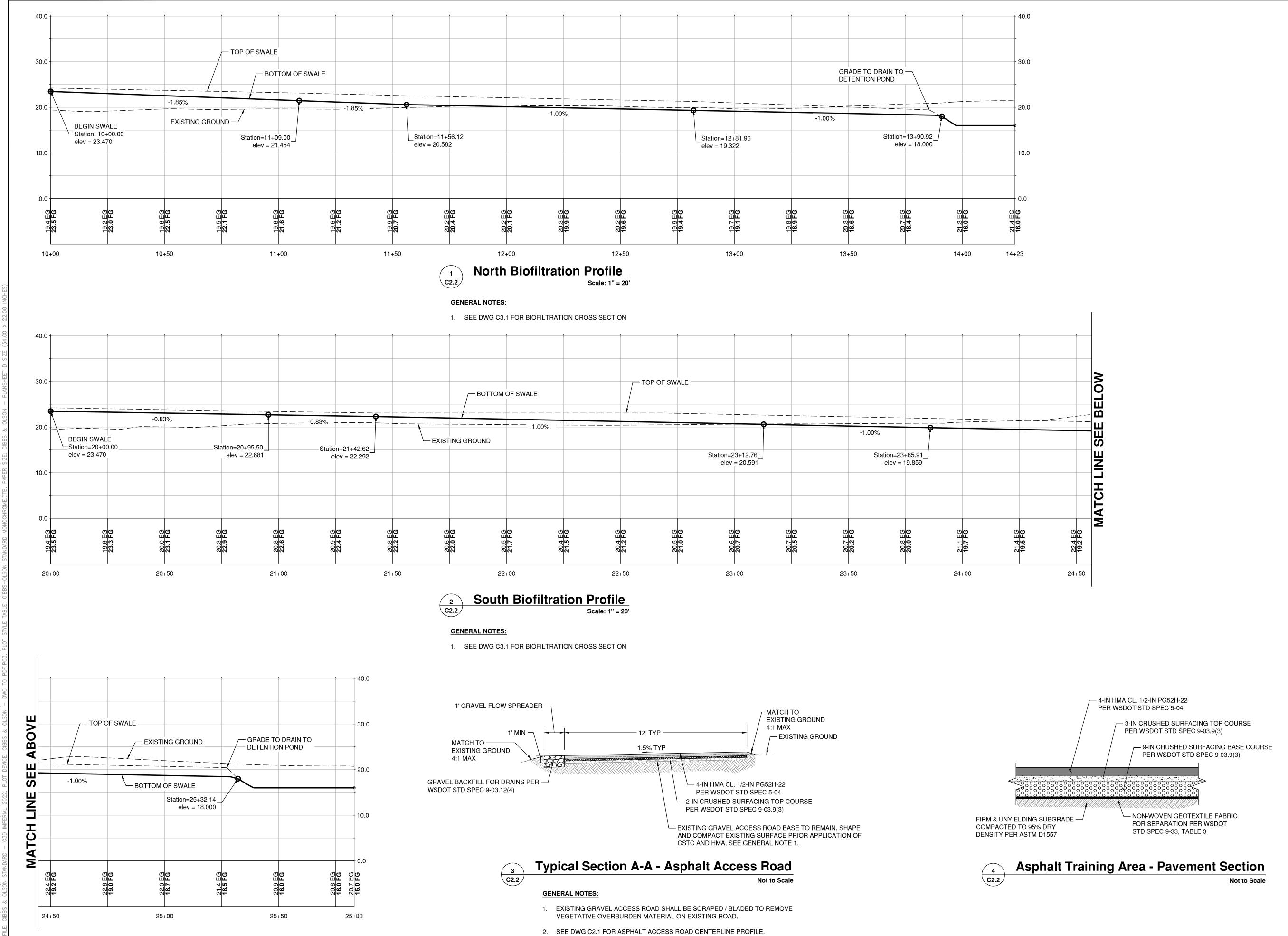


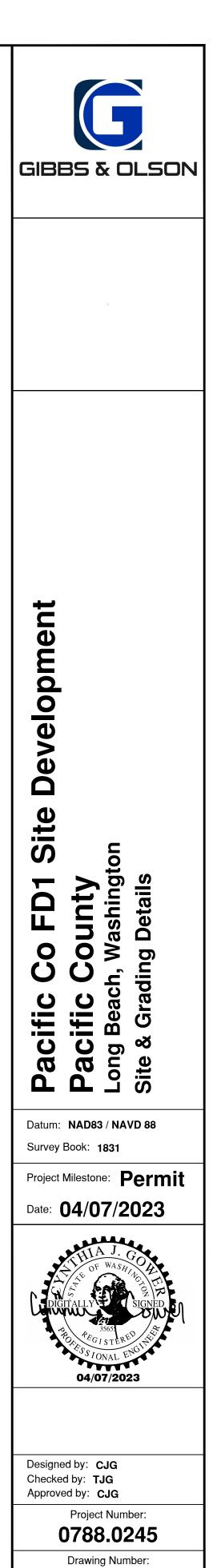








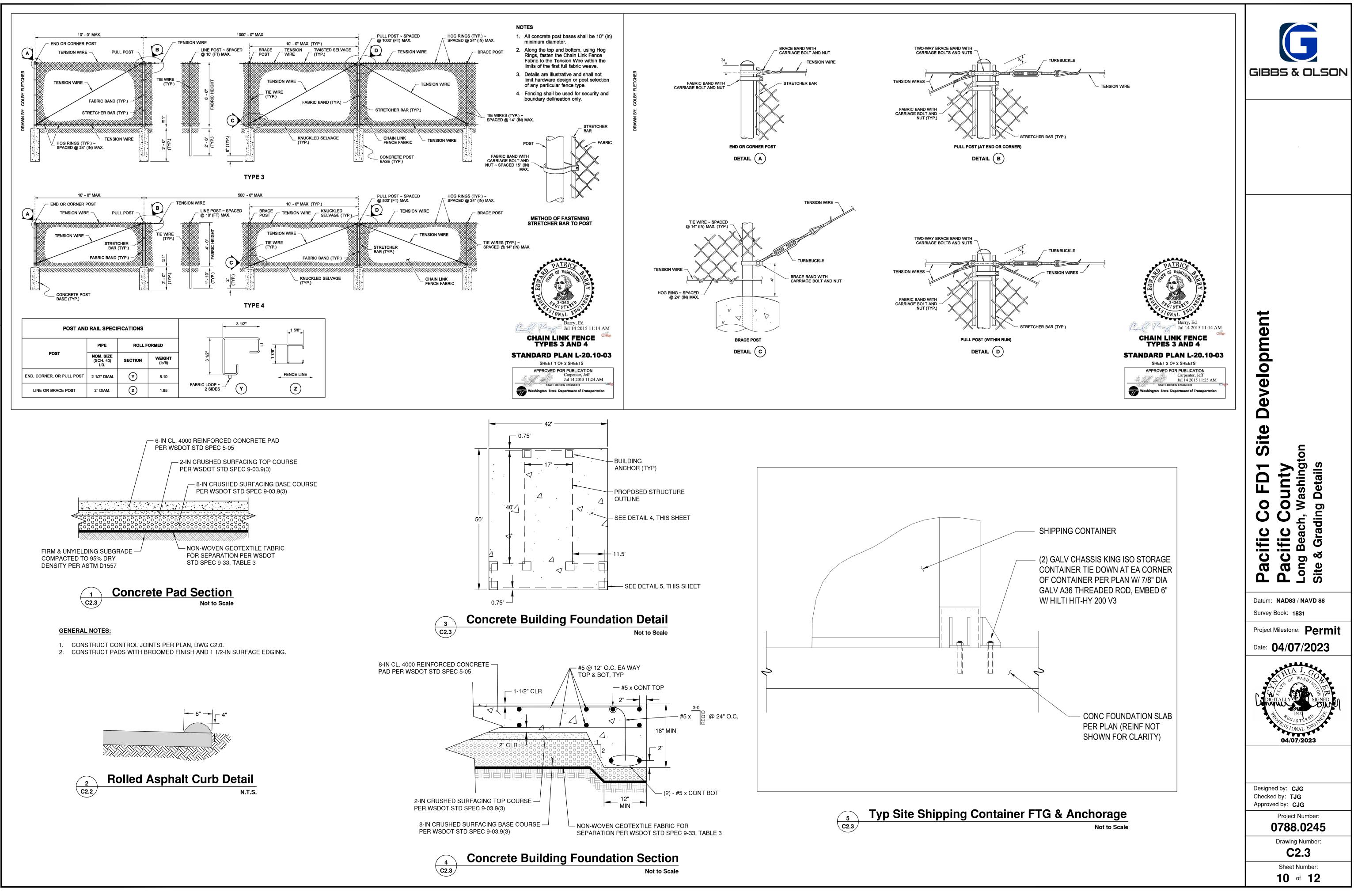


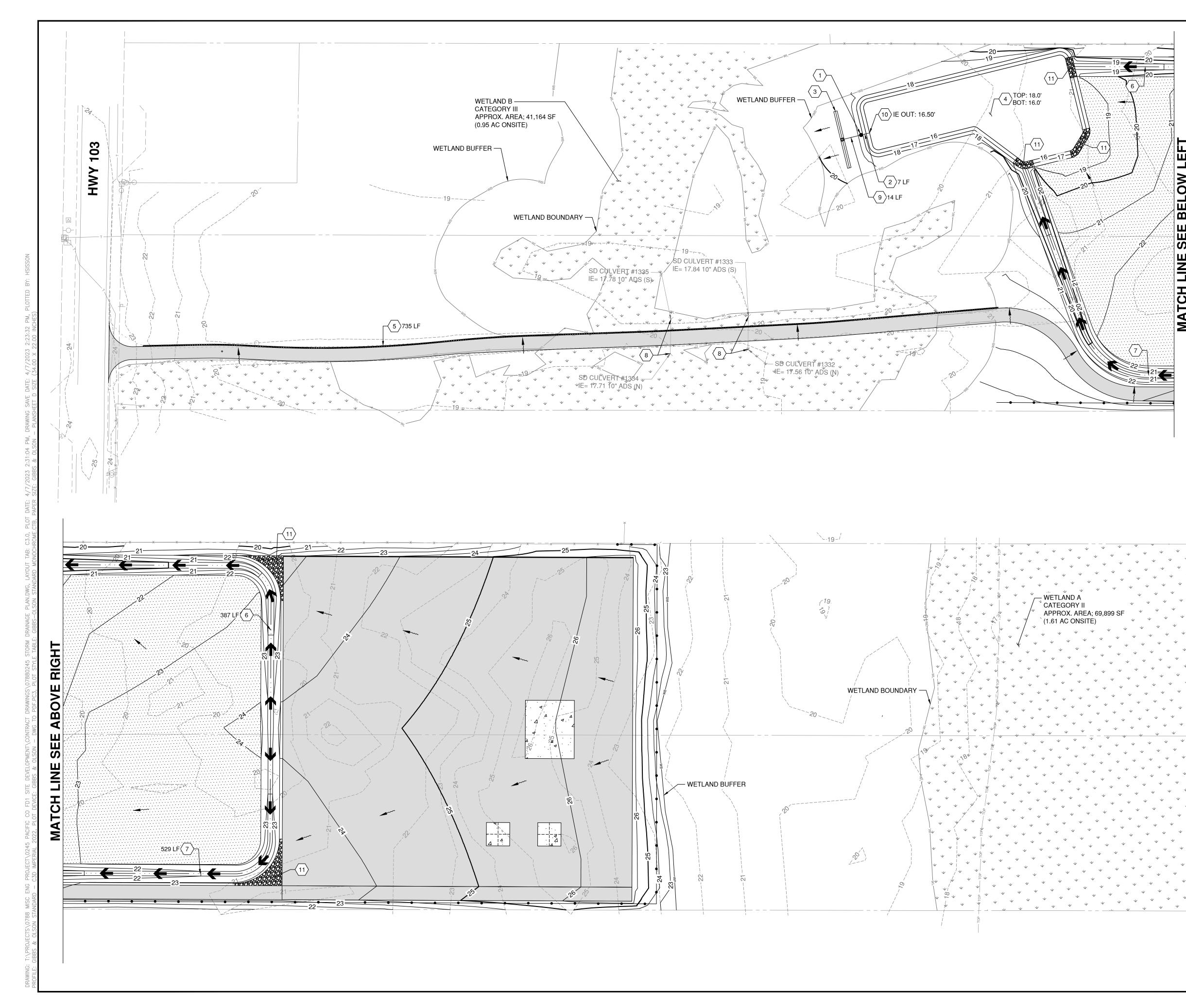


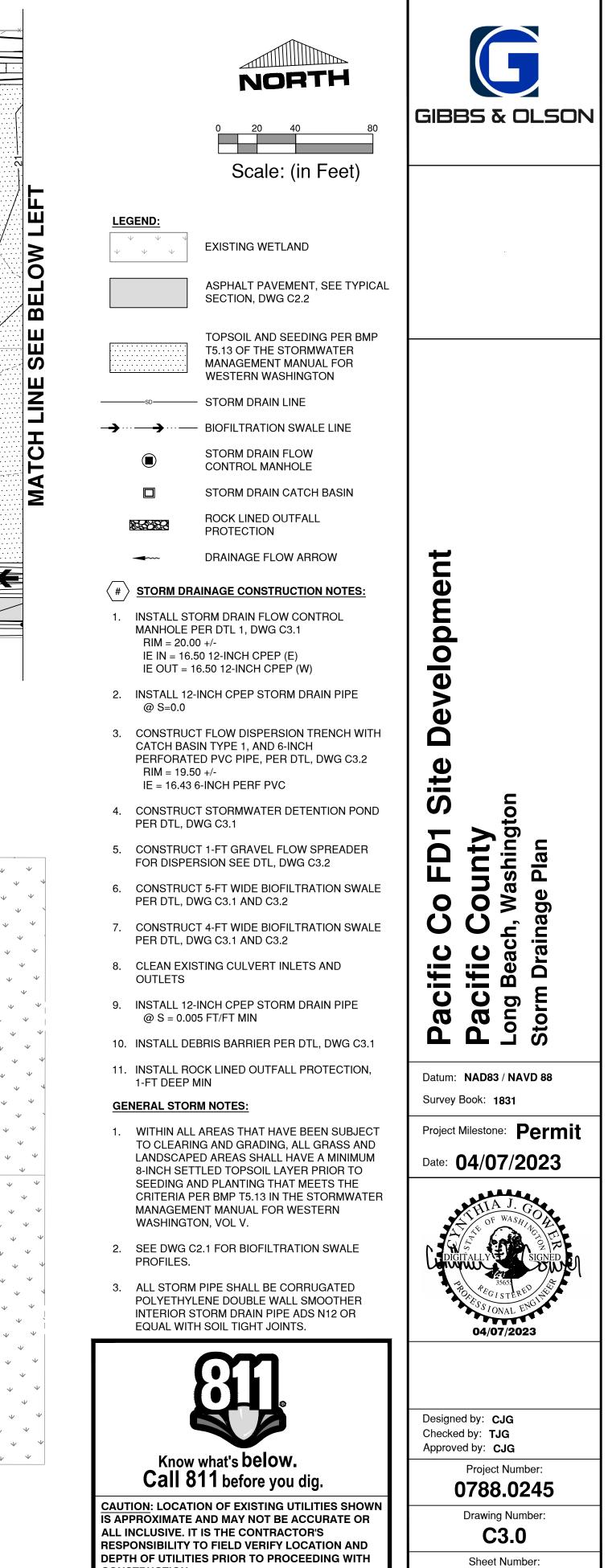
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CONSTRUCTION.

