# WASHINGTON DEPARTMENT OF FISH AND WILDLIFE

## SUTHERLAND LAKE ACCESS SITE RENOVATION

## CM:A042:12-1

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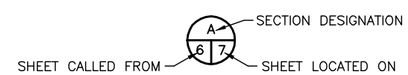
17. 6'x20' FLOATS


## ABBREVIATIONS

| | | |
|---|---|---|
| ALUM | – | ALUMINUM |
| L | – | ANGLE |
| APPROX. | – | APPROXIMATELY |
| BM | – | BENCH MARK |
| CL | – | CENTERLINE |
| CLR. | – | CLEARANCE |
| CONC | – | CONCRETE |
| ø | – | DIAMETER |
| EF | – | EACH FACE |
| ELEV | – | ELEVATION |
| EX. | – | EXISTING |
| F.B. | – | FLAT BAR |
| F.C. | – | FISH CONDUIT |
| FTG | – | FOOTING |
| GALV | – | GALVANIZED |
| GA. | – | GAUGE |
| HSS | – | HOLLOW STRUCTURAL SECTION |
| ID | – | INSIDE DIAMETER |
| IE | – | INVERT ELEVATION |
| LG | – | LONG |
| M.B. | – | MACHINE BOLT |
| MFG. | – | MANUFACTURER'S |
| MISC. | – | MISCELLANEOUS |
| MOD. | – | MODEL |
| MP | – | MIDPOINT OF CURVE |
| NIC | – | NOT IN CONTRACT |
| OC | – | ON CENTER |
| OSB | – | ORIENTED STRAND BOARD |
| OD | – | OUTSIDE DIAMETER |
| PAV'T | – | ASPHALT CONCRETE PAVEMENT |
| PC | – | POINT OF CURVATURE |
| PL | – | PLATE |
| PRC | – | POINT OF REVERSE CURVATURE |
| PT | – | PRESSURE TREATED |
| REQ'D | – | REQUIRED |
| SEC. | – | SECTION |
| S.F. | – | SQUARE FEET |
| SHT. | – | SHEET |
| SPEC'S. | – | PROJECT SPECIFICATIONS |
| S.S. | – | STAINLESS STEEL |
| TS | – | STRUCTURAL TUBING |
| TYP | – | TYPICAL |
| WHS | – | WELDED HEADED STUD |
| W.S. | – | WATER SURFACE |
| YD | – | YARD |

## SHEET SYMBOLS

DETAIL

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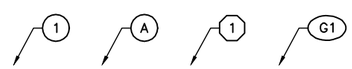


NOTE REFERENCE

REFERENCE DESIGNATION TO NOTE APPEARING ON SAME SHEET OR A PART OR MATERIAL IN A SCHEDULE

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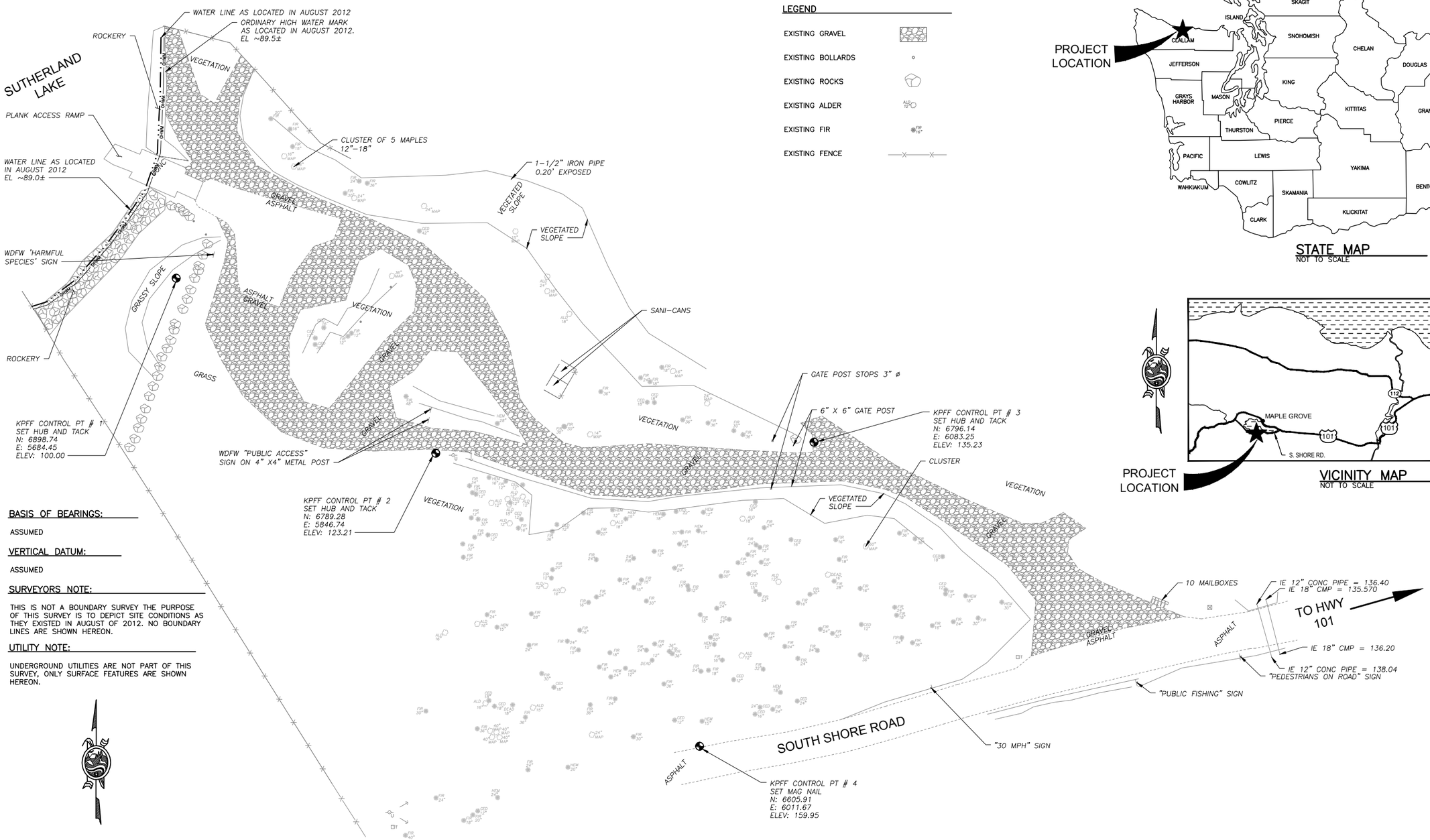



## LEGEND

- EXISTING GRAVEL
- EXISTING BOLLARDS
- EXISTING ROCKS
- EXISTING ALDER
- EXISTING FIR
- EXISTING FENCE

## BASIS OF BEARINGS:

ASSUMED

## VERTICAL DATUM:

ASSUMED

## SURVEYORS NOTE:

THIS IS NOT A BOUNDARY SURVEY THE PURPOSE OF THIS SURVEY IS TO DEPICT SITE CONDITIONS AS THEY EXISTED IN AUGUST OF 2012. NO BOUNDARY LINES ARE SHOWN HEREON.

## UTILITY NOTE:

UNDERGROUND UTILITIES ARE NOT PART OF THIS SURVEY, ONLY SURFACE FEATURES ARE SHOWN HEREON.

**GRAPHIC SCALE**

30 0 15 30 60 80

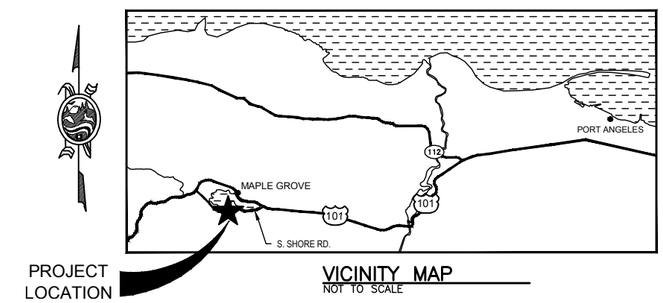
( IN FEET )
1 inch = 30 ft.

## EXISTING SITE PLAN

SCALE: 1" = 30'

## STATE MAP

NOT TO SCALE




## VICINITY MAP

NOT TO SCALE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WASHINGTON STATE
DEPARTMENT OF FISH AND WILDLIFE

STEVEN WADE KINSLEY — STATE OF WASHINGTON — 32701 — REGISTERED PROFESSIONAL ENGINEER

| SYM | DATE | REVISION DESCRIPTION | BY |
|---|---|---|---|

APPROVED AND RELEASED FOR CONSTRUCTION

CHIEF ENGINEER ..... DATE: .....

PROGRAM ..... DATE: .....

0 — 1"
BAR MEASURES ONE INCH ON ORIGINAL DRAWINGS

DESIGNED BY MRK
CHECKED BY SWK
DRAWN BY MRK
DATE 02/08/2013

SUTHERLAND LAKE, ACCESS

SITE RENOVATION

EXISTING SITE & VICINITY MAP

PROJECT NO. CM:A042:12–1

SHEET 2 OF 17


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## GENERAL NOTES

1. BEFORE ANY CONSTRUCTION OR DEVELOPMENT ACTIVITY, A PRE-CONSTRUCTION MEETING MUST BE HELD BETWEEN THE COUNTY, WDFW AND THE CONTRACTOR.
2. A COPY OF THESE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
3. GRADING ACTIVITIES (SITE ALTERATION) ARE LIMITED TO THE HOURS OF 7 A.M. TO 7 P.M. MONDAY THROUGH SATURDAY AND 10 A.M. TO 5 P.M. ON SUNDAY, UNLESS OTHERWISE APPROVED WITH A WRITTEN DECISION BY THE REVIEWING AGENCY.
4. IT SHALL BE THE APPLICANT'S/CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL CONSTRUCTION EASEMENTS NECESSARY BEFORE INITIATING OFF-SITE WORK. EASEMENTS REQUIRE REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
5. ALL UTILITY TRENCHES AND ROADWAY SUBGRADE SHALL BE BACKFILLED AND COMPACTED TO 95 PERCENT DENSITY, STANDARD PROCTOR.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED 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 CONTRACTOR. ANY WORK WITHIN THE TRAVELED RIGHT-OF-WAY THAT MAY INTERRUPT NORMAL TRAFFIC FLOW SHALL REQUIRE AT LEAST ONE FLAGGER FOR EACH LANE OF TRAFFIC AFFECTED. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) SHALL APPLY. WORK IN RIGHT-OF-WAY IS NOT AUTHORIZED UNTIL A TRAFFIC CONTROL PLAN IS APPROVED BY CLALLAM COUNTY.

## SURVEY NOTES:

1. BASIS OF BEARING IS ASSUMED.
2. VERTICAL DATUM IS ASSUMED.
3. BASE MAP HAS BEEN DEVELOPED FROM TOPOGRAPHIC SURVEY PERFORMED BY KPFF CONSULTING ENGINEERS IN AUGUST 2012.
4. UNDERGROUND UTILITIES ARE NOT A PART OF THIS SURVEY, ONLY SURFACE FEATURE ARE SHOWN.

## UTILITY NOTES:

1. THE EXISTENCE, LOCATION AND CHARACTERISTICS OF UNDERGROUND UTILITIES CONDUITS AND PIPES SHOWN ON THESE PLANS ARE NOT SHOWN. NO REPRESENTATION IS MADE AS TO THE ACCURACY OR COMPLETENESS OF SAID UTILITY INFORMATION. THE CONTRACTOR SHALL POTHOLE OR OTHERWISE CONFIRM CONDITIONS PRIOR TO CONSTRUCTION.
2. IF CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND SHALL NOT BEGIN CONSTRUCTION UNTIL THE CHANGED CONDITIONS HAVE BEEN EVALUATED.
3. THE CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINE CONDUITS OR PIPELINES SHOWN AND ANY OTHER IN-SERVICE LINES NOT OF RECORD OR NOT SHOWN ON THESE PLANS.
3. CALL THE UNDERGROUND LOCATOR LINE (1-800-424-5555) A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION.

## STORMWATER NOTES:

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH COUNTY OF CLALLAM STANDARDS, WSDFW STANDARDS AND THE MOST CURRENT COPY OF THE STATE OF WASHINGTON STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION (WSDOT/APWA).
2. TEMPORARY EROSION /WATER POLLUTION PREVENTION MEASURES SHALL BE REQUIRED IN ACCORDANCE WITH WSDOT SECTION 1-07.15, AS MODIFIED BY THE APWA SUPPLEMENT, OF THE CURRENT STATE OF WASHINGTON STANDARD SPECIFICATIONS. SHOULD THE TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES NOT PROVE ADEQUATE TO CONTROL EROSION AND SEDIMENTATION, THE APPLICANT/CONTRACTOR SHALL INSTALL ADDITIONAL FACILITIES AS NECESSARY TO PROTECT ADJACENT PROPERTIES, SENSITIVE AREAS, NATURAL WATER COURSES, AND/OR STORM DRAINAGE SYSTEMS.
3. ALL EROSION CONTROL AND STORMWATER FACILITIES SHALL BE REGULARLY INSPECTED AND MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION.

## GENERAL EXCAVATION NOTES

1. THE EXISTENCE, LOCATION AND CHARACTERISTICS OF UNDERGROUND UTILITIES SHOWN ON THESE PLANS HAS BEEN OBTAINED FROM A REVIEW OF AVAILABLE RECORD DATA. NO REPRESENTATION IS MADE AS TO THE ACCURACY OR COMPLETENESS OF SAID UTILITY INFORMATION. THE CONTRACTOR SHALL POTHOLE OR OTHERWISE CONFIRM CONDITIONS. IF CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND SHALL NOT BEGIN CONSTRUCTION UNTIL THE CHANGED CONDITIONS HAVE BEEN EVALUATED. THE CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT OF RECORD OR NOT SHOWN ON THESE PLANS.

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WASHINGTON STATE
DEPARTMENT OF FISH AND WILDLIFE

STEVEN WADE KINGSLEY · STATE OF WASHINGTON · 32791 · REGISTERED PROFESSIONAL ENGINEER

| SYM | DATE | REVISION DESCRIPTION | BY |
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CHIEF ENGINEER ..... DATE: .....
PROGRAM ..... DATE: .....

0 — 1"
BAR MEASURES ONE INCH ON ORIGINAL DRAWINGS

DESIGNED BY MRK
CHECKED BY SWK
DRAWN BY MRK
DATE 02/08/2013

SUTHERLAND LAKE, ACCESS
SITE RENOVATION
GENERAL NOTES

PROJECT NO. CM:A042:12-1



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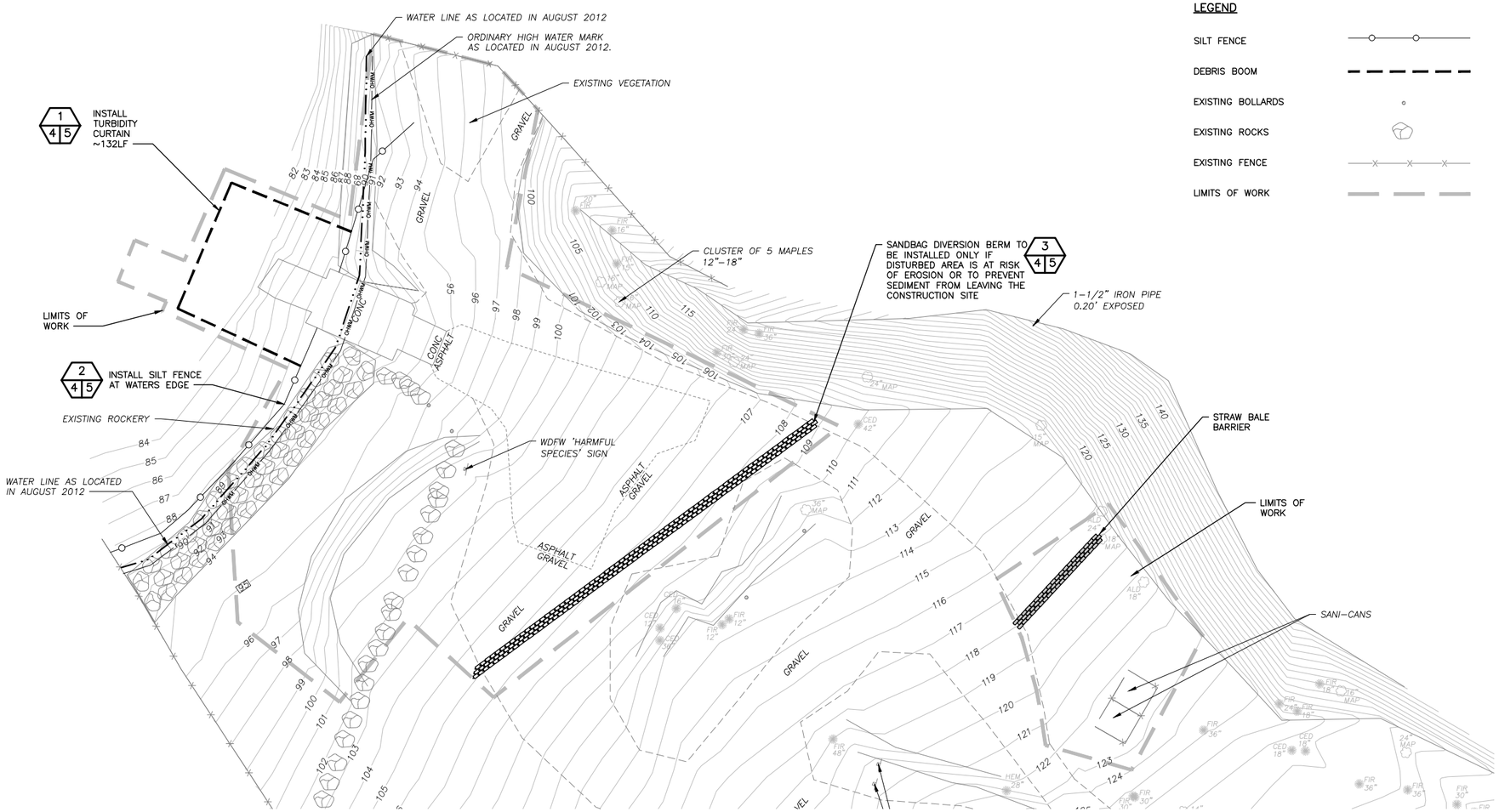


## TESC PLAN – RAMP REPLACEMENT

SCALE: 1" = 20'

### LEGEND

- SILT FENCE
- DEBRIS BOOM
- EXISTING BOLLARDS
- EXISTING ROCKS
- EXISTING FENCE
- LIMITS OF WORK

### STORMWATER POLLUTION PREVENTION PLAN NOTES (SWPPP)

IN COMPLIANCE WITH DOE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON – 2012

1. APPROVAL OF THIS EROSION/SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G. SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
2. THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.
3. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE APPLICANT/CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
4. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.
5. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT–LADEN WATER DO NOT LEAVE THE SITE.
6. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
7. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 48 HOURS FOLLOWING A MAJOR STORM EVENT.
8. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A TRAPPED CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.
9. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.

### EROSION AND SEDIMENTATION CONTROL (ESC) NOTES

1. FOR THE PURPOSES OF TEMPORARY EROSION/SEDIMENTATION CONTROL ON THIS PROJECT THE TERM "SEDIMENT" SHALL INCLUDE SOIL SEDIMENTS AS WELL AS SAWDUST, CONCRETE, AND OTHER DEBRIS OR PARTICULATE MATTER RESULTING FROM CONSTRUCTION ACTIVITIES.
2. APPROVAL OF THIS EROSION/SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G. SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
3. ON–SITE EROSION CONTROL MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL COMPLY WITH CONSTRUCTION STORMWATER PERMIT INCLUDING PREPARATION OF A STORMWATER POLLUTION PREVENTION PLAN AND IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. ANY PROBLEMS OCCURRING BEFORE FINAL ACCEPTANCE OF THE PROJECT SHALL BE CORRECTED BY THE CONTRACTOR.
4. IN THE EVENT THAT EROSION OR SEDIMENTATION OCCURS ON ADJACENT PROPERTY, ALL CONSTRUCTION WORK THAT WILL AGGRAVATE THE SITUATION MUST CEASE AND THE CONTRACTOR SHALL IMMEDIATELY COMMENCE RESTORATION OR MITIGATION MEASURES. RESTORATION ACTIVITY SHALL CONTINUE UNTIL SUCH TIME AS THE PROBLEM IS RECTIFIED.
5. ALL EROSION AND SEDIMENTATION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO THE FIRST STAGE OF SITE PREPARATION.
6. SHOULD THE TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES NOT PROVE ADEQUATE TO CONTROL EROSION AND SEDIMENTATION, THE CONTRACTOR SHALL INSTALL ADDITIONAL FACILITIES, AS NECESSARY, TO PROTECT ADJACENT PROPERTIES, SENSITIVE AREAS, NATURAL WATER COURSES AND/OR STORM DRAINAGE SYSTEMS.
7. IN ANY AREA WHICH HAS BEEN STRIPPED OF VEGETATION OR EXPERIENCED LAND DISTURBING ACTIVITIES, AND WHERE NO FURTHER WORK IS ANTICIPATED FOR A PERIOD EXCEEDING 48 HRS, ALL DISTURBED AREAS MUST BE IMMEDIATELY STABILIZED WITH MULCHING, GRASS PLANTING OR APPROVED EROSION CONTROL TREATMENT APPLICABLE TO THE TIME OF YEAR IN QUESTION.
8. ALL NECESSARY FACILITIES SHALL BE MAINTAINED ON–SITE TO PREVENT DEBRIS, DUST AND MUD FROM ENTERING AND/OR ACCUMULATING IN THE PUBLIC RIGHT–OF–WAY OR SUTHERLAND LAKE.
9. THE ESC FACILITIES SHOWN ON THIS SHEET ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS DURING THE CONSTRUCTION PERIOD. THESE ESC FACILIITES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT–LADEN WATER DO NOT ENTER SUTHERLAND LAKE OR LEAVE THE SITE.
10. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY OR AS DIRECTED BY THE ENGINEER TO ENSURE THEIR CONTINUED FUNCTIONING.
11. THE ESC FACILITIES ON INACTIVE AREAS OF THE SITE SHALL BE CONTINUOUSLY MAINTAINED AND INSPECTED A MINIMUM OF ONCE A MONTH OR WITHIN 48 HOURS FOLLOWING A MAJOR STORM EVENT.
12. THE CONTRACTOR SHALL PROTECT STOCKPILE AND EXCAVATION AREAS FROM THE RELEASE OF SEDIMENT. STOCKPILES SHALL BE COVERED AT ALL TIMES WHILE NOT IN USE TO KEEP THE STORED MATERIAL DRY.
13. SANDBAGS, GEOFABRIC AND/OR OTHER METHODS SHALL BE USED AROUND STOCKPILE AND EXCAVATION AREAS TO PREVENT RUNOFF OF SEDIMENTS.
14. ALL TEMPORARY EROSION AND SEDIMENT CONTROLS SHALL REMAIN UNTIL FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY CONTROLS ARE NO LONGER NEEDED, WHICHEVER IS LATER. TRAPPED SEDIMENT SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY.

GRAPHIC SCALE

20 0 10 20 40 80

( IN FEET )
1 inch = 20 ft.

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STEVEN WADE KINGLEY, STATE OF WASHINGTON, 32791, REGISTERED PROFESSIONAL ENGINEER

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DESIGNED BY MRK
CHECKED BY SWK
DRAWN BY MRK
DATE 02/08/2013

SUTHERLAND LAKE, ACCESS
SITE RENOVATION
TEMPORARY EROSION & SEDIMENTATION CONTROL PLAN

PROJECT NO. CM:A042:12–1

SHEET 4 OF 17

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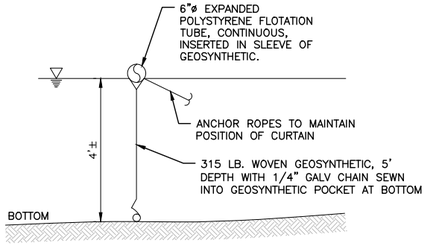
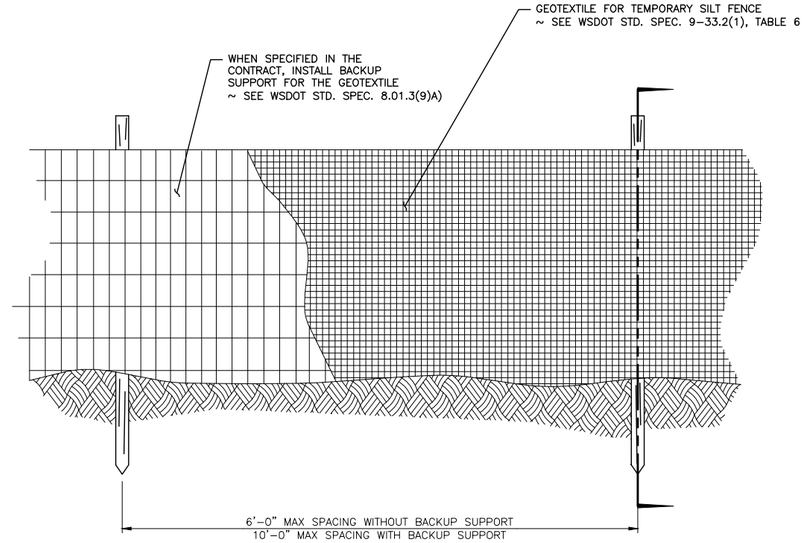



**NOTES:**

1. SILT CURTAIN AVAILABLE FROM NORTHWEST LININGS, KENT, WA.
2. GEOSYNTHETIC SHALL BE PERMEATEX 2315 OR EQUAL.
3. SEE PERMITS PRIOR TO INSTALLATION.

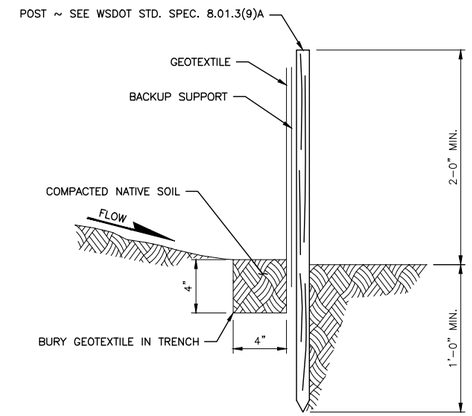
## TURBIDITY CURTAIN (1 / 4 5)
NOT TO SCALE




**ELEVATION VIEW**

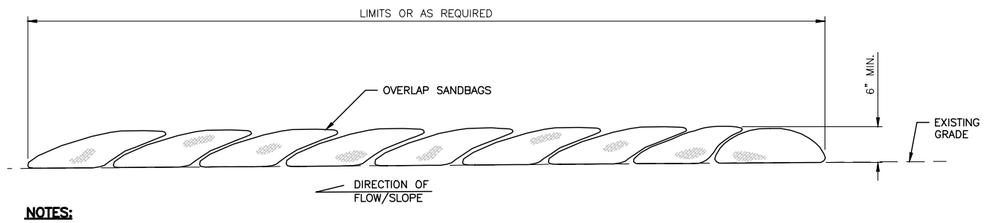
**NOTES:**

1. MAXIMIZE DETENTION OF STORMWATER BY PLACING FENCE AS FAR AWAY FROM TOE OF SLOPE AS POSSIBLE WITHOUT ENCROACHING ON SENSITIVE AREAS OR OUTSIDE OF THE CLEARING BOUNDARIES.
2. INSTALL SILT FENCING ALONG CONTOURS WHENEVER POSSIBLE.
3. INSTALL THE ENDS OF THE SILT FENCE TO POINT SLIGHTLY UP-SLOPE TO PRE-VENT SEDIMENT FROM FLOWING AROUND THE ENDS OF THE FENCE.
4. PERFORM MAINTENANCE IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATIONS 8.01.3(9)A AND 8.01.3(15).




**SECTION**

## SILT FENCE DETAIL (2 / 4 5)
NOT TO SCALE




**NOTES:**

1. SANDBAGS OF EITHER BURLAP OR WOVEN GEOTEXTILE FABRIC ARE FILLED WITH GRAVEL AND SAND, LAYERED AND PACKED TIGHTLY.
2. INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT.

## SANDBAG DIVERSION BERM DETAIL (3 / 4 5)
NOT TO SCALE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SUTHERLAND LAKE, ACCESS
SITE RENOVATION
TEMPORARY EROSION & SEDIMENTATION CONTROL DETAILS

PROJECT NO. CM:A042:12-1
SHEET 5 OF 17


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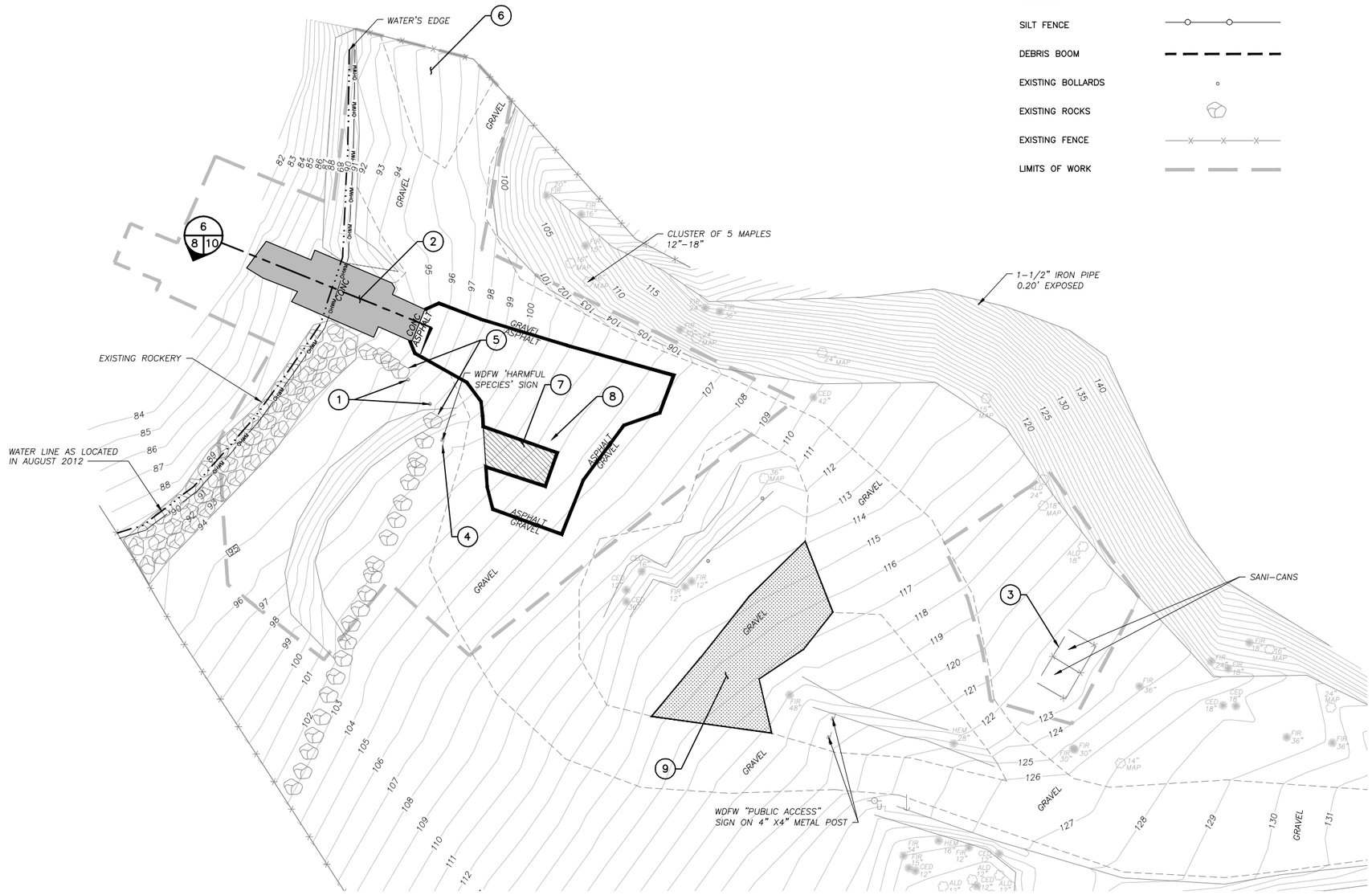


## DEMOLITION PLAN – RAMP REPLACEMENT

SCALE: 1" = 20'

## LEGEND

- SILT FENCE
- DEBRIS BOOM
- EXISTING BOLLARDS
- EXISTING ROCKS
- EXISTING FENCE
- LIMITS OF WORK

## GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, ALL DEMOLISHED MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF WDFW PROPERTY. KEEP PUBLIC AREAS CLEAN AT ALL TIMES.

## DEMOLITION NOTES:

1. REMOVE EXISTING BOLLARDS AND CHAIN, REINSTALL AS SHOWN ON SHEET 7.
2. DEMOLISH EXISTING CONCRETE BOAT RAMP PLANKS AND CONCRETE BLOCK MATS.
3. DEMOLISH EXISTING SANI–CAN/VAULT TOILETS, VAULT SLAB AND FENCE ENCLOSURE. SEE SHEET 8 FOR RESTORATION.
4. REMOVE EXISTING WDFW "HARMFUL SPECIES" SIGN, REINSTALL AS SHOWN ON SHEET 7.
5. RELOCATE ROCKS AS NECESSARY, COORDINATE LOCATIONS WITH OWNER.
6. CLEAR VEGETATION IN THIS AREA.
7. DEMOLISH ~ 310 SF EXISTING POTHOLED PAVEMENT
8. ~70LF ASPHALT PAVEMENT SAWCUT
9. CONSTRUCTION LAYDOWN AREA ON EXISTING GRAVEL

GRAPHIC SCALE

20 0 10 20 40 80

( IN FEET )
1 inch = 20 ft.

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WASHINGTON STATE
DEPARTMENT OF FISH AND WILDLIFE

STEVEN WADE KINGSLEY, STATE OF WASHINGTON, 32791, REGISTERED PROFESSIONAL ENGINEER

| SYM | DATE | REVISION DESCRIPTION | BY |
|---|---|---|---|

APPROVED AND RELEASED FOR CONSTRUCTION

CHIEF ENGINEER ..... DATE: .....

PROGRAM ..... DATE: .....

0 — 1"
BAR MEASURES ONE INCH ON ORIGINAL DRAWINGS

DESIGNED BY MRK
CHECKED BY SWK
DRAWN BY MRK
DATE 02/08/2013

SUTHERLAND LAKE, ACCESS

SITE RENOVATION

DEMOLITION PLAN

PROJECT NO. CM:A042:12–1

SHEET 6 OF 17

File: I:\112\112220 WDFW Access Sites\112220.20 Sutherland Access\Design\ACAD\A04221c006 (Demo Plan).dwg TAB:06
Plotted: 2/8/13 at 4:55pm By: swaskin
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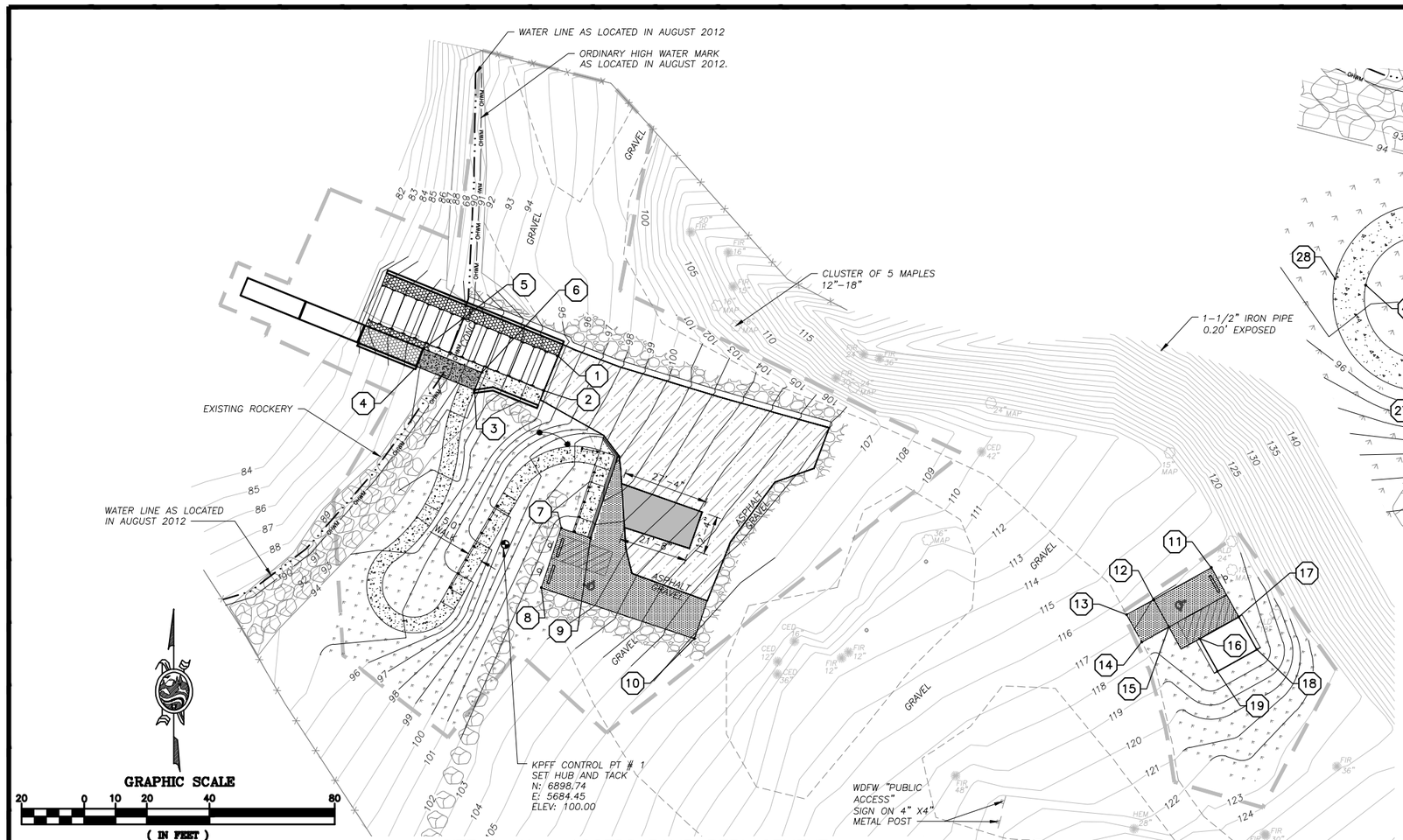
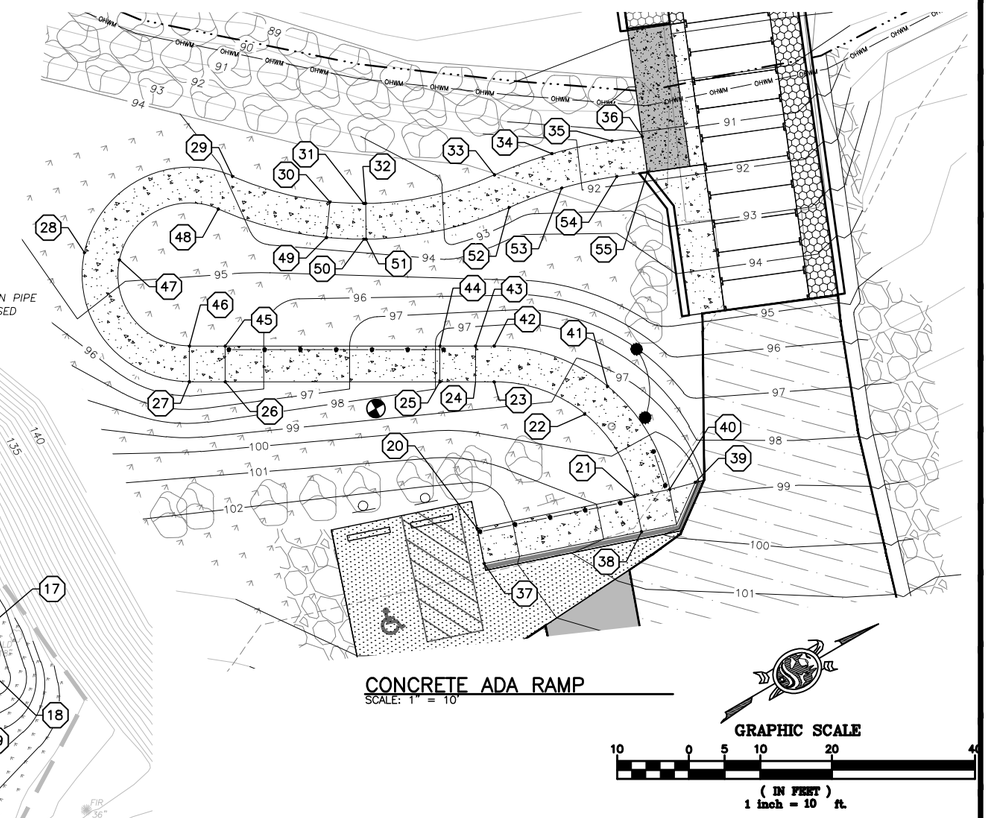



SITE PLAN – ACCESS RAMP REPLACEMENT
SCALE: 1" = 20'




CONCRETE ADA RAMP
SCALE: 1" = 10'

| CURVE & PAVING DATA | | | |
|---|---|---|---|
| # | | NORTHING | EASTING | ELEVATION |
| 1 | | 6958.97 | 5701.33 | 94.80 |
| 2 | | 6947.85 | 5696.84 | 94.80 |
| 3 | | 6948.15 | 5674.72 | 91.54 |
| 4 | | 6955.63 | 5656.18 | 91.31 |
| 5 | | 6961.20 | 5658.42 | 91.31 |
| 6 | | 6953.71 | 5676.97 | 91.54 |
| 7 | | 6903.91 | 5702.37 | 102.42 |
| 8 | | 6884.94 | 5696.04 | 102.64 |
| 9 | | 6900.79 | 5711.73 | 102.43 |
| 10 | | 6868.65 | 5744.89 | 107.05 |
| 11 | | 6891.32 | 5909.94 | 117.04 |
| 12 | | 6881.09 | 5891.54 | 117.04 |
| 13 | | 6876.31 | 5882.93 | 116.40 |
| 14 | | 6867.53 | 5887.72 | 117.40 |
| 15 | | 6872.35 | 5896.40 | 117.24 |
| 16 | | 6865.36 | 5900.28 | 117.40 |
| 17 | | 6875.58 | 5918.68 | 117.40 |
| 18 | | 6865.17 | 5924.47 | 117.40 |
| 19 | | 6858.21 | 5911.94 | 117.40 |

| CURVE & PAVING DATA | | | | |
|---|---|---|---|---|
| # | | NORTHING | EASTING | ELEVATION |
| 20 | | 6902.69 | 5706.04 | 102.42 |
| 21 | PC | 6923.97 | 5713.13 | 100.55 |
| 22 | MP | 6923.69 | 5699.70 | 99.36 |
| 23 | PT | 6914.97 | 5689.47 | 98.27 |
| 24 | | 6912.73 | 5688.18 | 98.05 |
| 25 | | 6908.39 | 5685.69 | 98.05 |
| 26 | | 6882.39 | 5670.72 | 95.55 |
| 27 | PC | 6878.06 | 5668.23 | 95.55 |
| 28 | MP | 6874.35 | 5645.24 | 94.76 |
| 29 | PRC | 6897.61 | 5646.32 | 93.96 |
| 30 | | 6907.64 | 5656.21 | 93.54 |
| 31 | MP | 6911.60 | 5658.74 | 93.54 |
| 32 | | 6911.86 | 5658.89 | 93.54 |
| 33 | PRC | 6929.43 | 5664.40 | 92.61 |
| 34 | MP | 6937.87 | 5665.84 | 92.18 |
| 35 | PT | 6946.02 | 5668.47 | 91.76 |
| 36 | | 6950.02 | 5670.09 | 91.54 |
| 37 | | 6901.11 | 5710.78 | 102.42 |
| 38 | | 6922.39 | 5717.88 | 100.55 |

| CURVE & PAVING DATA | | | | |
|---|---|---|---|---|
| # | | NORTHING | EASTING | ELEVATION |
| 39 | | 6932.30 | 5715.66 | 100.55 |
| 40 | PC | 6928.71 | 5714.72 | 100.55 |
| 41 | MP | 6928.36 | 5697.92 | 99.39 |
| 42 | PT | 6917.47 | 5685.14 | 98.23 |
| 43 | | 6915.22 | 5683.85 | 98.05 |
| 44 | | 6910.89 | 5681.35 | 98.05 |
| 45 | | 6884.89 | 5666.39 | 95.55 |
| 46 | PC | 6880.55 | 5663.89 | 95.55 |
| 47 | MP | 6878.08 | 5648.57 | 94.85 |
| 48 | PRC | 6893.59 | 5649.29 | 93.60 |
| 49 | | 6904.73 | 5660.27 | 93.54 |
| 50 | MP | 6909.13 | 5663.09 | 93.54 |
| 51 | | 6909.42 | 5663.25 | 93.54 |
| 52 | PRC | 6928.94 | 5669.38 | 92.53 |
| 53 | MP | 6936.68 | 5670.70 | 92.14 |
| 54 | PT | 6944.15 | 5673.11 | 91.75 |
| 55 | | 6948.15 | 5674.72 | 91.54 |

*BASIS OF BEARINGS ARE ASSUMED.
NORTHINGS AND EASTINGS ARE BASED OFF OF AN ASSUMED COORDINATE SYSTEM.
THE ENGINEER WILL PROVIDE THE CONTRACTOR WITH A TOPOGRAPHIC SURVEY IN AUTOCAD.
SEE SHEET 3 FOR ALL SURVEY CONTROL POINTS.

NOTES:

1. ALL KEY NOTES REFERENCE ASPHALT PAVEMENT OR CONCRETE WALK LIMITS, UNLESS NOTED BELOW.
2. KEY NOTES 1 & 2 REFERENCE TOP OF CONCRETE RAMP PLANKS.
3. KEY NOTES 3–6 REFERENCE CONCRETE ABUTMENT.
4. KEY NOTES 15–18 REFERENCE THE CTX DOUBLE CASCADIAN TOILET VAULT LIMITS.
5. WHERE NO KEYNOTE CALLOUT IS SHOWN PAVING LIMITS ARE INTENDED TO MATCH EXISTING LIMITS.

LEGEND

- ARMORFLEX MAT
- GRAVEL
- ADA CONCRETE RAMP (A / 8 | 12)
- ASPHALT OVERLAY (B / 8 | 9)
- NEW ASPHALT PAVEMENT (C / 8 | 9)
- RESTORATION OF EXISTING PAVEMENT (D / 8 | 9)
- CONCRETE ABUTMENT PER STRUCTURAL SEE SHEET 15
- TOPSOIL & SEEDING FOR RESTORATION
- LIMITS OF WORK

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CHIEF ENGINEER ..... DATE: .....
PROGRAM ..... DATE: .....

0 — 1"
BAR MEASURES ONE INCH ON ORIGINAL DRAWINGS

DESIGNED BY MRK
CHECKED BY SWK
DRAWN BY MRK
DATE 02/08/2013

SUTHERLAND LAKE, ACCESS
SITE RENOVATION
SITE PLAN/HORIZONTAL CONTROL

PROJECT NO. CM:A042:12–1
SHEET 7 OF 17

File: I:\12-1\12220\WDFW Access Sites\112220.20 Sutherland Access\Design\ACADA04221c007 (Site Plan).dwg TAB:07
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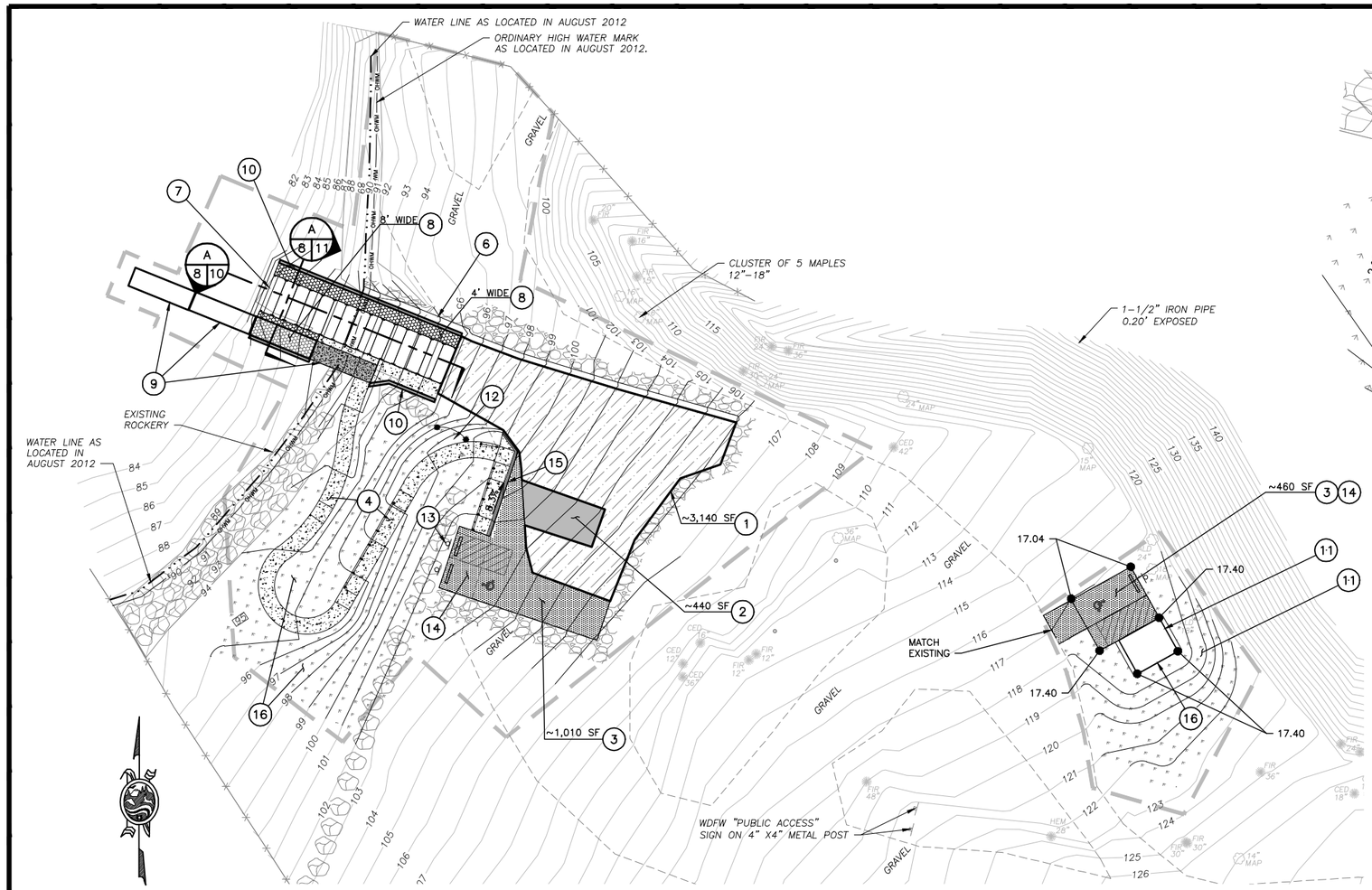


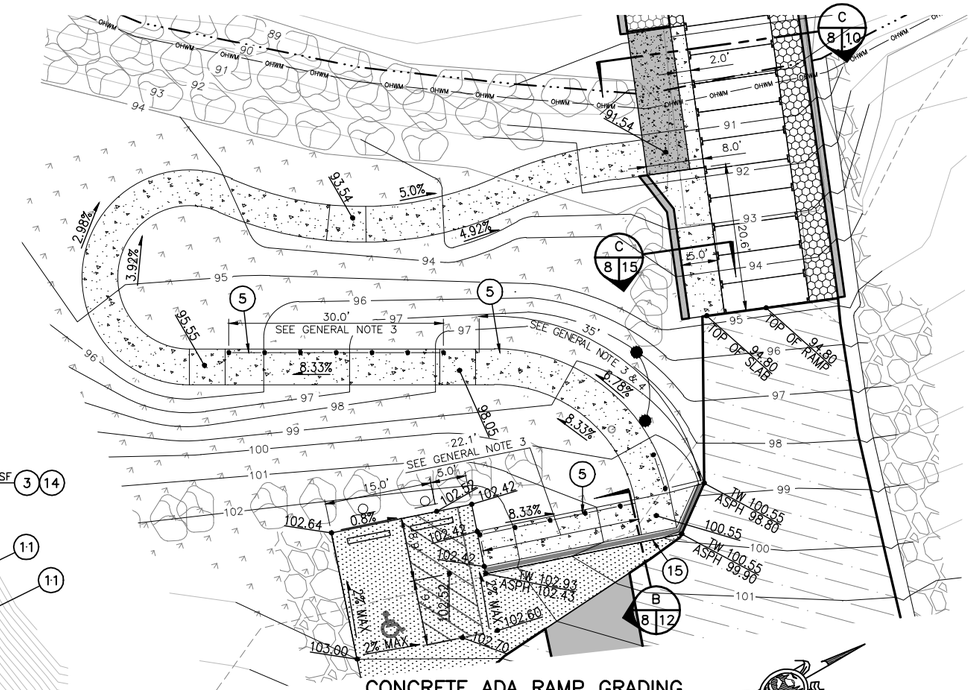

## PAVING & GRADING PLAN – ACCESS RAMP REPLACEMENT

SCALE: 1" = 20'

GRAPHIC SCALE

20 0 10 20 40 80

( IN FEET )
1 inch = 20 ft.




## CONCRETE ADA RAMP GRADING

SCALE: 1" = 10'

NOTES

1. FOR FULL CURVE AND ELEVATION DATA FOR THE CONCRETE ADA RAMP SEE SHEET 7.

GRAPHIC SCALE

10 0 5 10 20 40

( IN FEET )
1 inch = 10 ft.

## KEY NOTES:

1. ASPHALT OVERLAY LIMITS (B 8|9)
2. ASPHALT PAVEMENT RESTORATION (D 8|9)
3. NEW ASPHALT PAVEMENT (C 8|9)
4. ~1,040 SF NEW CONCRETE ADA ACCESSIBLE PATH (A 8|12)
5. ADA HANDRAIL (5 8|12)
6. ~123LF 2' WIDE CONCRETE VALLEY GUTTER (A 8|9)
7. CONCRETE RAMP PLANKS, SEE SHEET 11
8. ARMORFLEX MAT, SEE SHEET 11
9. CONCRETE ABUTMENT AND (3) FLOATS, SEE STRUCTURAL SHEETS 13–17.
10. GRAVEL SHOULDER, TYP
11. NEW CXT DOUBLE CASCADIAN VAULT TOILET, SEE GENERAL NOTE 1
12. NEW LOCATION FOR BOLLARDS AND CHAIN, COORDINATE WITH WDFW
13. RELOCATE WDFW "HARMFUL SPECIES" SIGN, COORDINATE WITH WDFW
14. ADA PARKING STRIPING & SIGNAGE (1 8|12)
15. 1' WIDE CONCRETE WALL (B 8|12)
16. TOPSOIL AND SEED FOR RESTORATION

## GENERAL NOTES

1. CONTRACTOR TO PROVIDE EXCAVATION, SUBGRADE PREPARATION, GRADING AND SITE RESTORATION FOR THE VAULT TOILET. VAULT TOILET TO BE PROVIDED AND INSTALLED BY OTHERS.
2. SPOT ELEVATION GIVEN AT ADA RAMP LANDINGS APPLY TO ENTIRE LANDING. LANDINGS SHALL BE LEVEL IN ALL DIRECTIONS. R
3. HANDRAIL LENGTHS SHOWN ARE HORIZONTAL DIMENSIONS ONLY (BIRDS–EYE VIEW). PRIOR TO FABRICATION, LENGTH AND LOCATION OF HANDRAILS SHALL BE STAKED IN THE FIELD BY THE CONTRACTOR AND VERIFIED BY THE OWNER.
4. RAIL AROUND THE CURVE SHALL BE BE MADE UP OF FIVE INDIVIDUAL 5' LONG SECTIONS OF HANDRAIL WITH ELBOWS ON EACH SECTION AS SHOWN IN DETAIL 5, SHEET 12.

## LEGEND

- ARMORFLEX MAT
- GRAVEL
- ADA CONCRETE RAMP (A 8|12)
- ASPHALT OVERLAY (B 8|9)
- NEW ASPHALT PAVEMENT (C 8|9)
- RESTORATION OF EXISTING PAVEMENT (D 8|9)
- CONCRETE ABUTMENT PER STRUCTURAL SEE SHEET 15
- TOPSOIL & SEEDING FOR RESTORATION
- LIMITS OF WORK

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WASHINGTON STATE
DEPARTMENT OF FISH AND WILDLIFE

STEVEN WADE KINGSLEY · STATE OF WASHINGTON · 32791 · REGISTERED PROFESSIONAL ENGINEER

| SYM | DATE | REVISION DESCRIPTION | BY |
|---|---|---|---|

APPROVED AND RELEASED FOR CONSTRUCTION

CHIEF ENGINEER ..... DATE: .....
PROGRAM ..... DATE: .....

0 —— 1"
BAR MEASURES ONE INCH ON ORIGINAL DRAWINGS

DESIGNED BY MRK
CHECKED BY SWK
DRAWN BY MRK
DATE 02/08/2013

SUTHERLAND LAKE, ACCESS
SITE RENOVATION
PAVING AND GRADING PLAN

PROJECT NO. CM:A042:12–1

SHEET 8 OF 17

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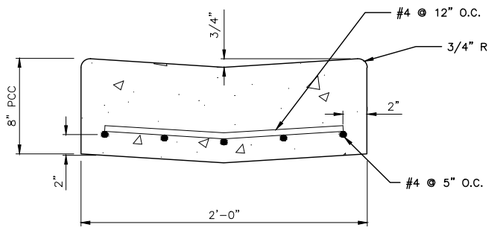
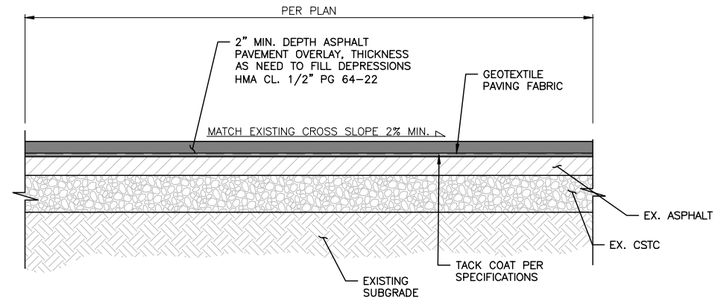
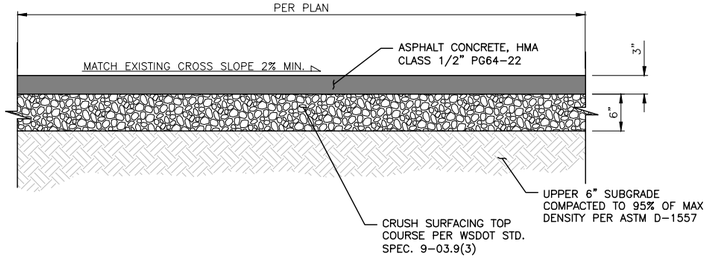



VALLEY GUTTER SECTION (A / 8 9)
NOT TO SCALE




ASPHALT OVERLAY SECTION (B / 8 9)
NOT TO SCALE




ASPHALT PAVING SECTION (C / 8 9)
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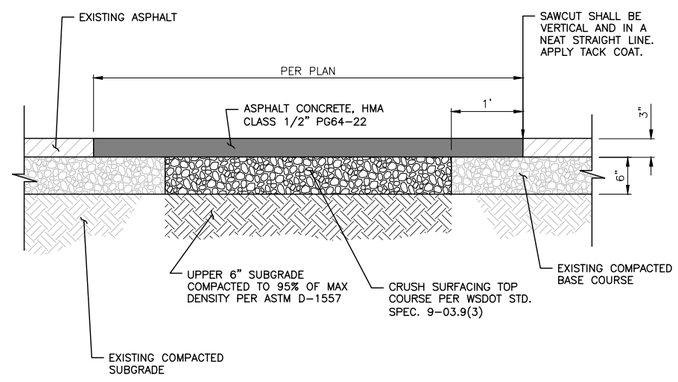


ASPHALT RESTORATION SECTION (D / 8 9)
NOT TO SCALE


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PROGRAM ..... DATE: .....

0 — 1"
BAR MEASURES ONE INCH ON ORIGINAL DRAWINGS

DESIGNED BY MRK
CHECKED BY SWK
DRAWN BY MRK
DATE 02/08/2013

SUTHERLAND LAKE, ACCESS
SITE RENOVATION
STANDARD SITE SECTIONS

PROJECT NO. CM:A042:12-1
SHEET 9 OF 17


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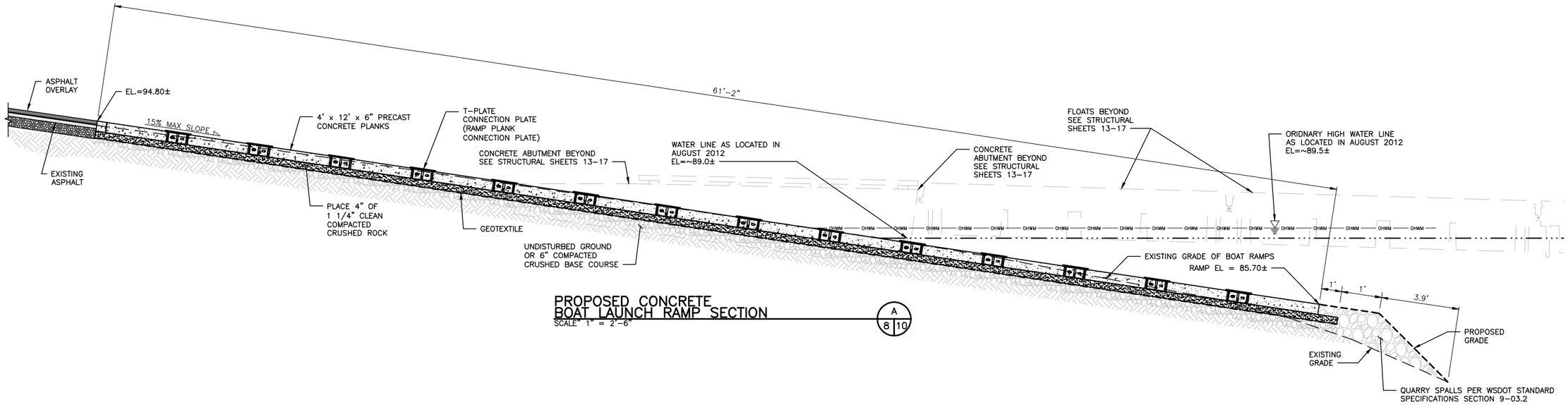
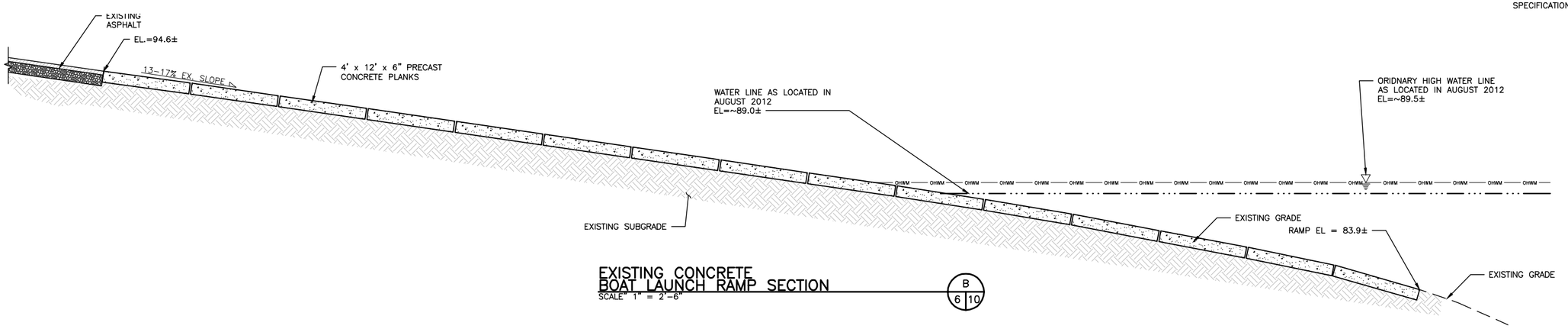



## PROPOSED CONCRETE BOAT LAUNCH RAMP SECTION

SCALE 1" = 2'-6"

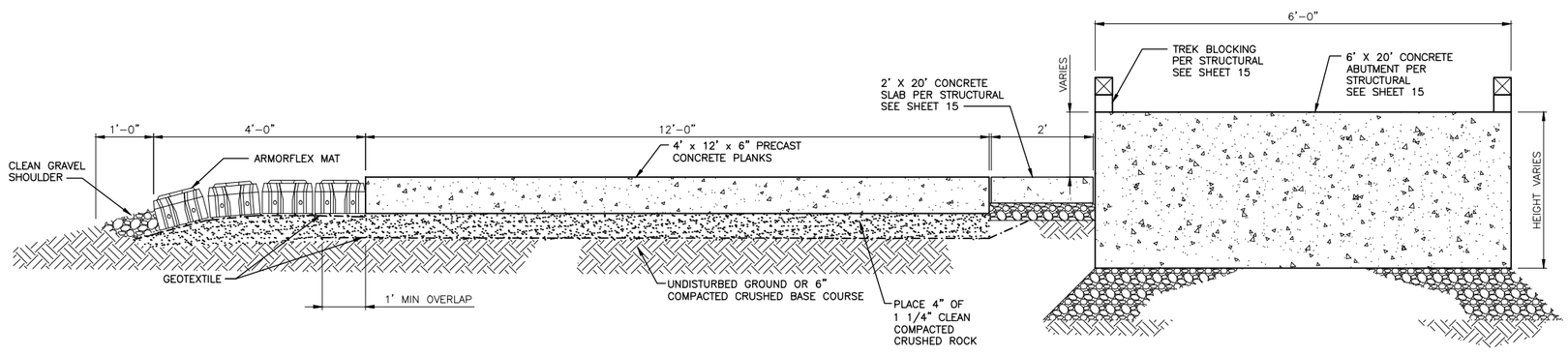
A 8 10




## EXISTING CONCRETE BOAT LAUNCH RAMP SECTION

SCALE 1" = 2'-6"

B 6 10




## BOAT RAMP SECTION AT ABUTMENT

NOT TO SCALE

C 8 10 | C 11 10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| | | APPROVED AND RELEASED FOR CONSTRUCTION | |

CHIEF ENGINEER ..... DATE: .....
PROGRAM ..... DATE: .....

0 — 1"
BAR MEASURES ONE INCH ON ORIGINAL DRAWINGS

DESIGNED BY MRK
CHECKED BY SWK
DRAWN BY MRK
DATE 02/08/2013

SUTHERLAND LAKE, ACCESS
SITE RENOVATION
BOAT ACCESS RAMP SECTIONS

PROJECT NO. CM:A042:12-1

SHEET 10 OF 17


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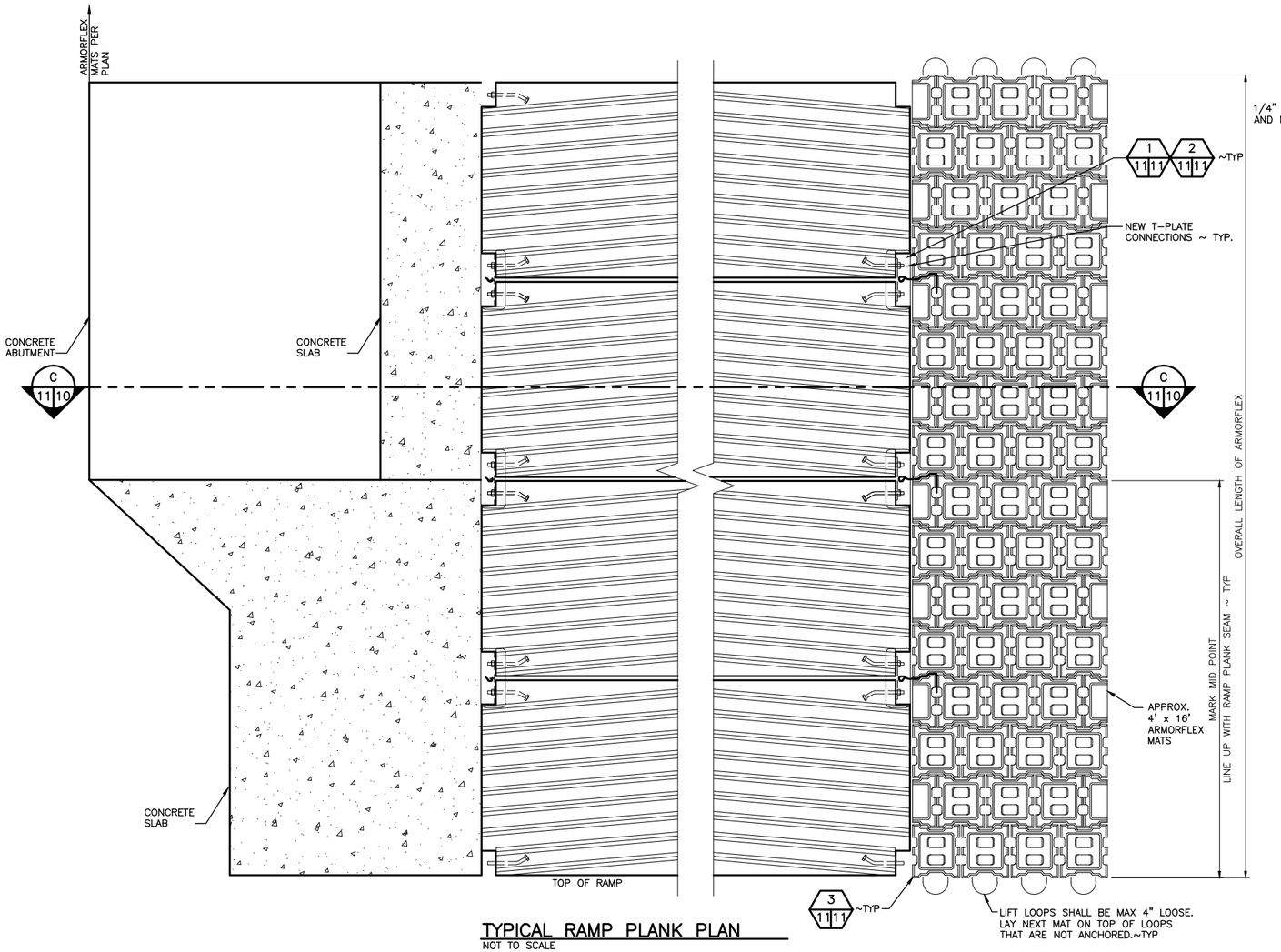
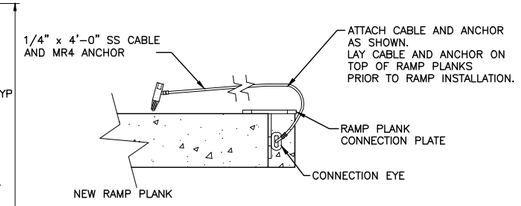



## TYPICAL RAMP PLANK PLAN
NOT TO SCALE

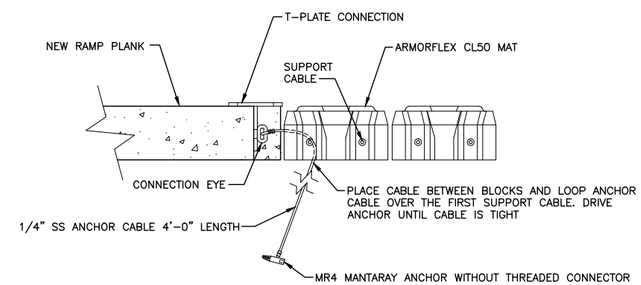



## CABLE INSTALLATION DETAIL
NOT TO SCALE
1 11|11

### RAMP INSTALLATION NOTES:

1. EXCAVATE RAMP PROFILE TO SUBRAGE ELEVATIONS. TYPICAL RAMP SLOPE SHALL BE BETWEEN 12% AND 15% AS SHOWN IN PROFILE.
2. INSTALL GEOTEXTILE.
3. PLACE 4" OF 1 ¼" CLEAN COMPACTED CRUSHED ROCK.
4. CONNECT ANCHORS TO CONNECTION PLATES TO CREATE CONNECTION PLATE ASSEMBLY.
5. PLACE STEEL BAR ON CRUSHED ROCK FOR TEMPORARY GUIDE TRACK.
6. LAY FIRST TWO PLANKS AT WATER'S EDGE AND FASTEN TOGETHER WITH CONNECTION PLATE ASSEMBLY.
7. PUSH PANKS INTO WATER. CONNECT SUBSEQUENT PLANKS AND CONTINUE TO PUSH RAMP UNTIL FINAL END IS REACHED.
8. ASSEMBLE REMAINING PLANKS ABOVE WATER.
9. WEAVE CABLE THROUGH ARMORFLEX TO ASSEMBLE MATS TO DESIRED DIMENSIONS PER MANUFACTURERS RECOMMENDATION. FASTEN GEOTEXTILE TO THE BOTTOM OF THE MAT.
10. LAY ARMOFLEX MATS PER LAYOUT. USE CENTER OF MAT TO ALIGN PLACEMENT. TOP ELEVATION OF ARMORFLEX SHALL MATCH FINISHED GROUND SURFACE UNLESS NOTED OTHERWISE.
11. DRIVE ANCHORS THROUGH MAT AND TENSION CABLES. SEE DETAILS FOR MAT INSIDE AND END INSTALLATION. ANHORS ON THE OUTSIDE OF THE MATS SHALL BE REQUIRED AT 4-FOOT ON CENTER UNLESS NOTED.
12. FILL VOIDS WITH CLEAN 5/8" CRUSHED ROCK.

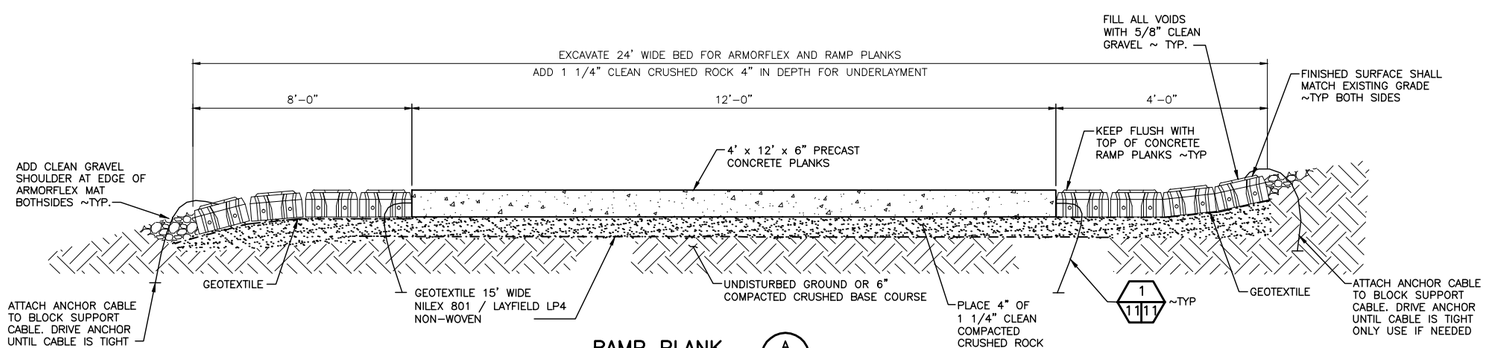
**NOTE:**
SEE DETAILS FOR INSTALLATION OF THE ANCHORING FOR THE ARMORFLEX MAT.



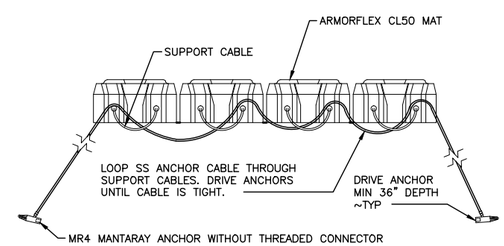

## ARMORFLEX MAT ANCHORING DETAIL
NOT TO SCALE
2 11|11

**NOTE:**

1. ANCHOR RAMP SIDE AND OUTSIDE EDGES OF ARMORFLEX FOR ICE PROTECTION.




## RAMP PLANK
NOT TO SCALE
A 8|11




## END OF ARMORFLEX MAT ANCHORING DETAIL
NOT TO SCALE
3 11|11

**NOTE:**
END MATS CAN BE VARIOUS WIDTHS. ADJUST ANCHOR CABLE LENGTH TO SIZE OF ARMORFLEX MAT.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PROGRAM ..... DATE: .....

0 — 1"
BAR MEASURES ONE INCH ON ORIGINAL DRAWINGS

DESIGNED BY MRK
CHECKED BY SWK
DRAWN BY MRK
DATE 02/08/2013

SUTHERLAND LAKE, ACCESS
SITE RENOVATION
STANDARD ARMOURFLEX INSTALLATION

PROJECT NO. CM:A042:12-1
SHEET 11 OF 17


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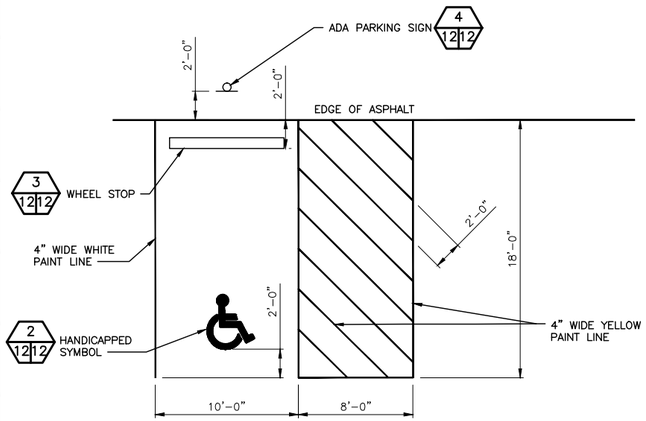
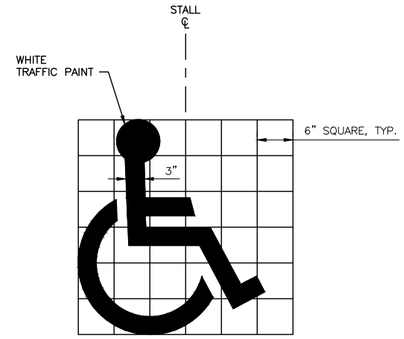


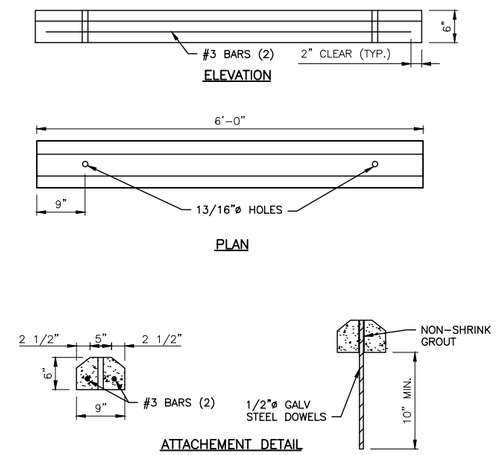

ADA GENERAL NOTE:

1. ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL HAVE A MAXIMUM SLOPE OF 1:48 (2%) PER ICC/ANSI A117.1 SECTION 503.4.

## ADA PARKING STALL STRIPING (1 / 8 12)
NOT TO SCALE



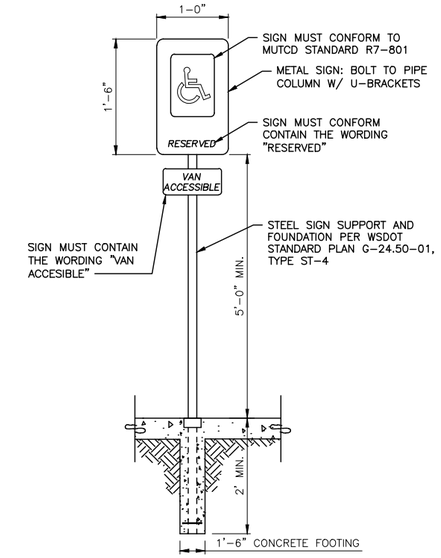

## ADA HANDICAL SYMBOL STRIPING (2 / 12 12)
NOT TO SCALE



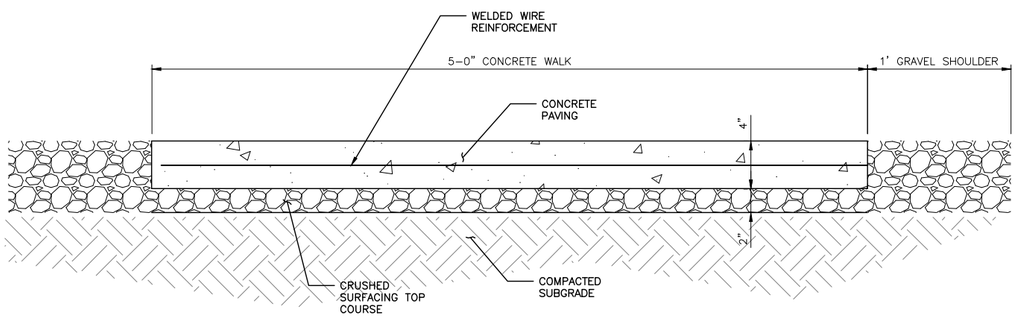

NOTES

1. THE NON-SHRINK GROUT USED TO ATTACH THE PRECAST CURB SHALL CONSIST OF 3:1 SAND AND CEMENT. GROUT TO A DEPTH OF 1" FROM THE TOP OF THE WHEEL STOP.
2. LOCATIONS FOR WEEPHOLES, AND V-SLOTS SHALL BE IDENTIFIED ON THE DELIVERY ORDER DRAWINGS.
3. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS.

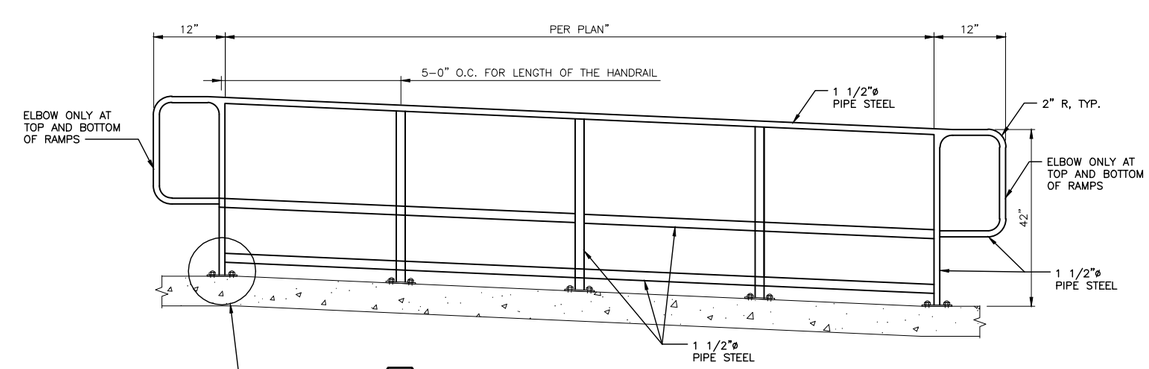
## CONCRETE WHEEL STOP (3 / 12 12)
NOT TO SCALE




## ADA PARKING SIGN (4 / 12 12)
NOT TO SCALE

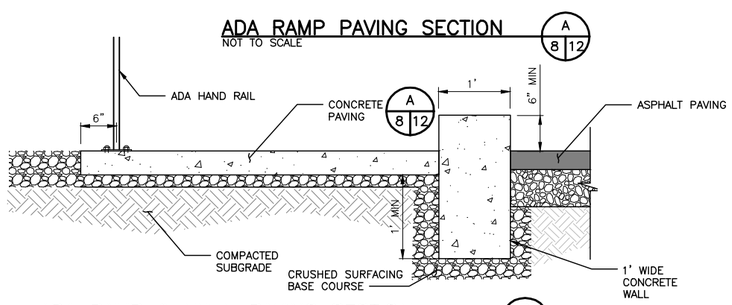



## ADA RAMP PAVING SECTION (A / 8 12)
NOT TO SCALE

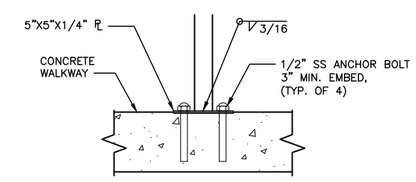



## ADA RAMP HAND RAIL (5 / 8 12)
NOT TO SCALE

NOTES:
1. ALL PIPE SHALL BE SCH40 STEEL PIPE.
2. GRIND WELD JOINTS SMOOTH.
3. HOT DIP GALVANIZE AND PVC COAT AFTER FABRICATION.
4. PRIOR TO FABRICATION, VERIFY HANDRAIL LENGTHS AS STAKED IN THE FIELD, SEE GENERAL NOTE 3 ON SHEET 8.




## ADA RAMP & WALL PAVING SECTION (B / 8 12)
NOT TO SCALE




## HAND RAIL CONNECTION DETAIL (6 / 12 12)
NOT TO SCALE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Fax (253) 396-0162


# WASHINGTON STATE DEPARTMENT OF FISH AND WILDLIFE

STEVEN WADE KINGSLEY — STATE OF WASHINGTON — 32791 — REGISTERED PROFESSIONAL ENGINEER

| SYM | DATE | REVISION DESCRIPTION | BY |
|---|---|---|---|
| | | APPROVED AND RELEASED FOR CONSTRUCTION | |

CHIEF ENGINEER ..... DATE: .....
PROGRAM ..... DATE: .....

0 — 1"
BAR MEASURES ONE INCH ON ORIGINAL DRAWINGS

DESIGNED BY MRK
CHECKED BY SWK
DRAWN BY MRK
DATE 02/08/2013

SUTHERLAND LAKE, ACCESS
SITE RENOVATION
ADA RAMP AND STRIPING DETAILS

PROJECT NO. CM:A042:12-1

SHEET 12 OF 17


File: I:\112\112220\WDFW Access Sites\112220.20 Sutherland Access\Design\ACAD\A042\21c012 (Civil Details).dwg TAB:12
Plotted: 2/8/13 at 4:45PM By: mujUK
XREFs: X-WDFW_T-Block

# GENERAL NOTES

1. CONSTRUCTION DOCUMENTS ARE NOT TO BE SCALED.
2. VERIFY ALL DIMENSIONS BEFORE PROCEEDING WITH CONSTRUCTION. ANY DIMENSIONAL DEVIATION FROM THAT SHOWN ON THE CONSTRUCTION DOCUMENTS, THAT MAY AFFECT THE INTENT OF DESIGN, SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION PROMPTLY AND RESOLUTION OBTAINED PRIOR TO PROCEEDING.
3. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING AND/OR SHORING OF ANY STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.
4. CONTRACTOR INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT. ALL DEVIATIONS AND/OR MODIFICATIONS TO THESE DRAWINGS SHALL BE APPROVED BY THE ENGINEER OF RECORD IN WRITING PRIOR TO CHANGE OR MODIFICATION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO DO THE WORK.
6. SHOP DRAWINGS AND MATERIAL DATA SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER PRIOR TO ANY FABRICATION OR CONSTRUCTION AND ARE TO BE CHECKED AND APPROVED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTAL TO THE ENGINEER.
7. REFERENCE GEOTECHNICAL REPORT BY GEO ENGINEERS, INC., DATED NOVEMBER 8, 2012. FOR MORE COMPLETE INFORMATION.
   EARTH WORK MATERIAL BACKFILL AND COMPACTION SHALL BE IN ACCORDANCE WITH THE RECOMMENDATION OF THE GEOTECHNICAL REPORT.

SS1–WA

# STRUCTURAL NOTES

| | |
|---|---|
| **REFERENCE CODE** | 2009 INTERNATIONAL BUILDING CODE |
| | SEISMIC<br>OCCUPANCY CATEGORY = I<br>SEISMIC DESIGN CATEGORY = D<br>IMPORTANCE FACTOR $I_E$ = 1.0<br>$S_S$ (MAPPED MAXIMUM CONSIDERED ACC) = 1.25<br>$S_1$ (MAPPED MAXIMUM CONSIDERED ACC) = 0.6<br>$S_{DS}$ (SHORT PERIOD ACC) = 0.833<br>$S_{D1}$ ( 1 SECOND PERIOD ACC) = 0.6<br>SITE CLASS = D<br>FOUNDATION<br>Design Allowable Bearing Pressure = 3500 PSF<br>Static Passive Pressure = 250 PCF<br>Base Friction Coefficient = 0.35 |
| **SHOP DRAWINGS** | REINFORCING STEEL AND STEEL FABRICATION SEE SPECIFICATIONS FOR COMPLETE LIST. |
| **STRUCTURAL TESTS** | CYLINDER TESTS REQUIRED – SEE SPECIFICATIONS |
| **SPECIAL INSPECTION** | CONCRETE, REINFORCING STEEL, BOLTING, WELDING |
| | SEE SPEC INSPECTION TABLE |

SS2–WA

# CONCRETE FABRICATION

| MATERIAL | QUANTITY | REMARKS |
|---|---|---|
| CONCRETE~ 4000 PSI 28 DAY COMPRESSIVE STRENGTH WITH AIR ENTRAINMENT<br>SUBMIT CONCRETE MIX DESIGN FOR WRITTEN APPROVAL PRIOR TO ANY POUR<br>CALL ENGINEERING FOR INSPECTION PRIOR TO ANY POUR<br>FORMS TO REMAIN IN PLACE A MINIMUM OF 7 DAYS AFTER POUR UNLESS APPROVED BY THE ENGINEER<br>PROVIDE ¾" X ¾" CHAMFER AT ALL EXPOSED EDGES<br>LIGHT BROOM FINISH ON ALL SLABS<br>CYLINDER TESTS REQUIRED (6) AT 7, 14, AND 28 DAYS TO BE TAKEN BY OWNER | AS REQUIRED | SEE SPECIFICATIONS |
| CONCRETE REINFORCING STEEL<br>1. DEFORMED BAR ASTM A615 GRADE 60<br>2. WELDED BARS ASTM A706 GRADE 60 | | |
| COAT ALL EXPOSED REINFORCING WITH ZINC COATING | | |

# METALS SCHEDULE

| MATERIAL | QUANTITY | REMARKS |
|---|---|---|
| PLATES | AS REQUIRED | ASTM A36 |
| ANGLES | AS REQUIRED | ASTM A36 |
| W–SHAPES | AS REQUIRED | ASTM A992 (GRADE 50 MINIMUM) |
| HSS–RECTANGULAR | AS REQUIRED | ASTM A500 GRADE B (Fy = 46 KSI MINIMUM) |
| HSS–PILE | AS REQUIRED | ASTM A500 GRADE B (Fy = 42 KSI MINMUM) |
| PIPE (STRUCTURAL) | AS REQUIRED | ASTM A53 GRADE B (Fy = 35 KSI MINIMUM) ~ SCH 40 STANDARD WEIGHT |
| CHANNELS | AS REQUIRED | ASTM A36 |
| STRUCTURAL BARS | AS REQUIRED | ASTM A36 |
| STAINLESS STEEL MATERIALS | AS REQUIRED | TYPE 316 |
| PERFORATED PLATE | AS REQUIRED | ASTM 5052 |
| STRUCTURAL TEES | AS REQUIRED | SEE W, M OR S SHAPES AS SPECIFIED |
| ALL STEEL MATERIALS TO BE HOT–DIPPED GALVANIZED AFTER FABRICATION UNLESS NOTED OTHERWISE. ALUMINUM AND STAINLESS STEEL MATERIALS TO BE NATURAL FINISH UNLESS NOTED OTHERWISE. | | |
| ALL METALS ARE CARBON STEEL UNLESS NOTED OTHERWISE. | | |
| GENERAL MATERIALS LIST ~ NOT ALL MATERIALS WILL NECESSARILY BE USED ON THIS PROJECT | | |

# CONNECTIONS

| TYPE | REMARKS |
|---|---|
| MACHINE BOLTS, U–BOLTS | ASTM A307 |
| HIGH STRENGTH BOLTS | ASTM A325 |
| THREADED ROD | ASTM A36 |
| WELDED HEADED STUDS (WHS) | ASTM A108 |

# SPECIAL INSPECTION SCHEDULE

ESTABLISHED PER 2009 IBC SECTION 109 & CHAPTER 17

| ITEM | CONTINUOUS INSPECTION | PERIODIC INSPECTION | COMMENTS |
|---|---|---|---|
| SOILS | | | |
| GRADING, EXCAVATION & FILL | | | BY GEOTECHNICAL ENGINEER |
| FINAL FOUNDATION PREPARATION | | | BY GEOTECHNICAL ENGINEER |
| | | | |
| PREFAB. CONSTRUCTION | | | REF. NOTE 5 |
| | | | |
| CONCRETE | | | |
| REINFORCING PLACEMENT | | X | |
| REINFORCING WELDING | | X | |
| ANCHOR BOLTS & INSERTS | X | | |
| PREPARATION OF TEST SPECIMENS | X | | |
| CONCRETE PLACEMENT | X | | |
| ADHESIVE ANCHOR PLACEMENT | X | | REF. NOTE 6 |
| EMBEDDED PLATES | | X | |
| CURING | | X | |
| | | | |
| STRUCTURAL STEEL | | | |
| FABRICATION & ERECTION | | X | REF. NOTE 7 |
| HIGH STRENGTH BOLTING | | | REF. NOTE 8 |
| SINGLE PASS FILLET WELDS ≤ 5/16" | | X | REF. NOTE 9 |
| FILLET WELDS > 5/16" | X | | REF. NOTE 9 |
| PARTIAL/COMPLETE PENETRATION WELD | X | | REF. NOTE 10 |
| | | | |
| OTHER WELDING | | | |
| WELDING OF ANCHORS AND STUDS | | X | |
| | | | |

## INSPECTION SCHEDULE NOTES:

1. THE ITEMS CHECKED WITH AN "X" SHALL BE INSPECTED IN ACCORDANCE WITH IBC CHAPTER 17 BY A CERTIFIED SPECIAL INSPECTOR FROM AN ESTABLISHED TESTING AGENCY. FOR MATERIAL SAMPLING AND TESTING REQUIREMENTS, REFER TO PROJECT SPECIFICATIONS, THE STRUCTURAL NOTES AND THE NOTES BELOW. THE TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE ENGINEER. ANY MATERIALS WHICH FAIL TO MEET THE PROJECT SPECIFICATIONS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER. SPECIAL INSPECTION TESTING REQUIREMENTS APPLY EQUALLY TO ALL BIDDER DESIGNED COMPONENTS.
2. SPECIAL INSPECTION IS NOT REQUIRED FOR WORK PERFORMED BY AN APPROVED FABRICATOR PER IBC SECTION 1704.2.2.
3. CONTINUOUS SPECIAL INSPECTION MEANS THAT THE SPECIAL INSPECTOR IS ON THE SITE AT ALL TIMES OBSERVING THE WORK REQUIRING SPECIAL INSPECTION (IBC 1702). PERIODIC SPECIAL INSPECTION MEANS THAT THE SPECIAL INSPECTOR IS ON SITE AT TIME INTERVALS NECESSARY TO CONFIRM THAT ALL WORK REQUIRING SPECIAL INSPECTION IS IN COMPLIANCE.
4. INSPECTION REQUIREMENTS FOR SYSTEMS DESIGNED BY OTHERS SHALL BE DEFINED BY THE REGISTERED DESIGN PROFESSIONAL RESPONSIBLE FOR THEIR DESIGN.
5. INSPECTION FOR PREFABRICATED CONSTRUCTION SHALL BE THE SAME AS IF THE MATERIAL USED IN THE CONSTRUCTION TOOK PLACE ON SITE. CONTINUOUS INSPECTION WILL NOT BE REQUIRED DURING PREFABRICATION IF THE APPROVED AGENCY CERTIFIES THE CONSTRUCTION AND FURNISHES EVIDENCE OF COMPLIANCE.
6. INSPECTION OF DRILLED CONCRETE ANCHORS, INCLUDING EXPANSION AND ADHESIVE ANCHORS, SHALL INCLUDE VISUAL VERIFICATION OF DRILLED HOLE DEPTH, SPACING, EDGE DISTANCES AND HOLE CLEANING. FOR ADHESIVE ANCHORS, ADHESIVE INSTALLATION SHALL BE OBSERVED AND ADHESIVE PRODUCT SPECIFICATION AND PREPARATION SHALL BE VERIFIED.
7. INSPECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH IBC SECTION 1704.3.
8. INSPECTION OF BOLT INSTALLATION FOR PRETENSIONING IS PERMITTED TO BE PERFORMED ON A PERIODIC BASIS WHEN USING THE TURN–OF–NUT METHOD WITH MATCHMARKING TECHNIQUES, THE DIRECT TENSION INDICATOR METHOD, OR THE ALTERNATE DESIGN FASTENER (TWIST–OFF BOLT) METHOD. JOINTS DESIGNATED AS SNUG TIGHT NEED ONLY PERIODIC INSPECTION.
9. ALL WELDS SHALL BE VISUALLY INSPECTED.
10. ALL COMPLETE PENETRATION WELDS SHALL BE TESTED ULTRASONICALLY OR BY USING ANOTHER APPROVED METHOD.

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WASHINGTON STATE
DEPARTMENT OF FISH AND WILDLIFE

SCOTT E. KUEBLER · STATE OF WASHINGTON · 38536 · STRUCTURAL ENGINEER · PROFESSIONAL ENGINEER

| SYM | DATE | REVISION DESCRIPTION | BY |
|---|---|---|---|

APPROVED AND RELEASED FOR CONSTRUCTION
CHIEF ENGINEER ..... DATE: .....
PROGRAM ..... DATE: .....

0 — 1"
BAR MEASURES ONE INCH ON ORIGINAL DRAWINGS

DESIGNED BY M.D.
CHECKED BY S.K.
DRAWN BY J.H.
DATE 02/08/2013

SUTHERLAND LAKE, ACCESS
SITE RENOVATION
STRUCTURAL NOTES

PROJECT NO. CM:A042:12–1
SHEET 13 OF 17

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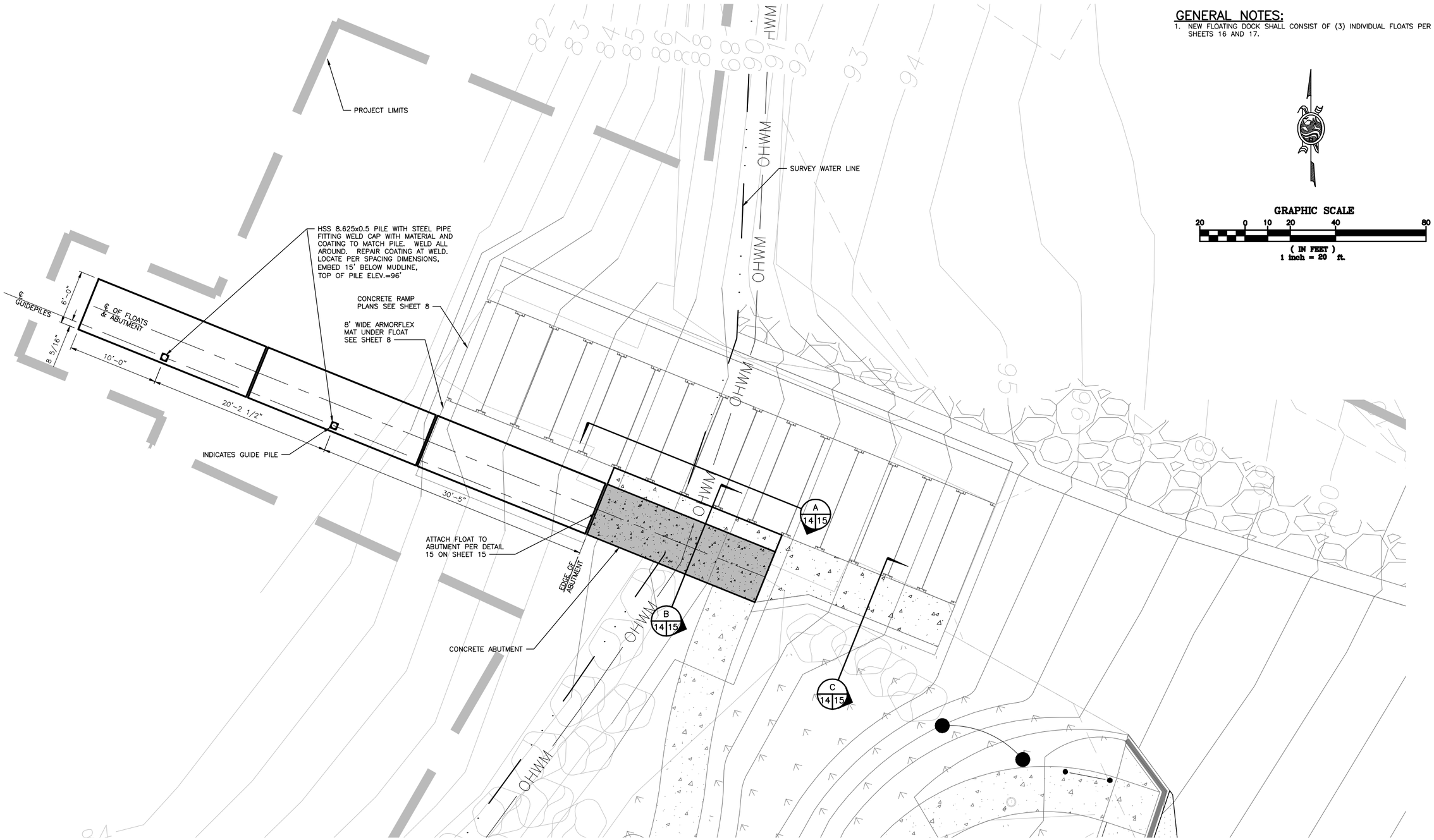
## GENERAL NOTES:

1. NEW FLOATING DOCK SHALL CONSIST OF (3) INDIVIDUAL FLOATS PER SHEETS 16 AND 17.




## ABUTMENT AND FLOATS PLAN

SCALE: 1"=5'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*WASHINGTON STATE*
*DEPARTMENT OF FISH AND WILDLIFE*

SCOTT E. KUEBLER
STATE OF WASHINGTON
38536
STRUCTURAL ENGINEER
PROFESSIONAL ENGINEER

| SYM | DATE | REVISION DESCRIPTION | BY |
|---|---|---|---|
| | | | |

APPROVED AND RELEASED FOR CONSTRUCTION

CHIEF ENGINEER . . . . DATE: .
PROGRAM . . . . DATE: .

0 — 1"
BAR MEASURES ONE INCH ON ORIGINAL DRAWINGS

DESIGNED BY M.D.
CHECKED BY S.K.
DRAWN BY J.H.
DATE 02/08/2013

SUTHERLAND LAKE, ACCESS
SITE RENOVATION
ABUTMENT AND FLOATS PLAN

PROJECT NO. CM:A042:12-1

SHEET 14 OF 17


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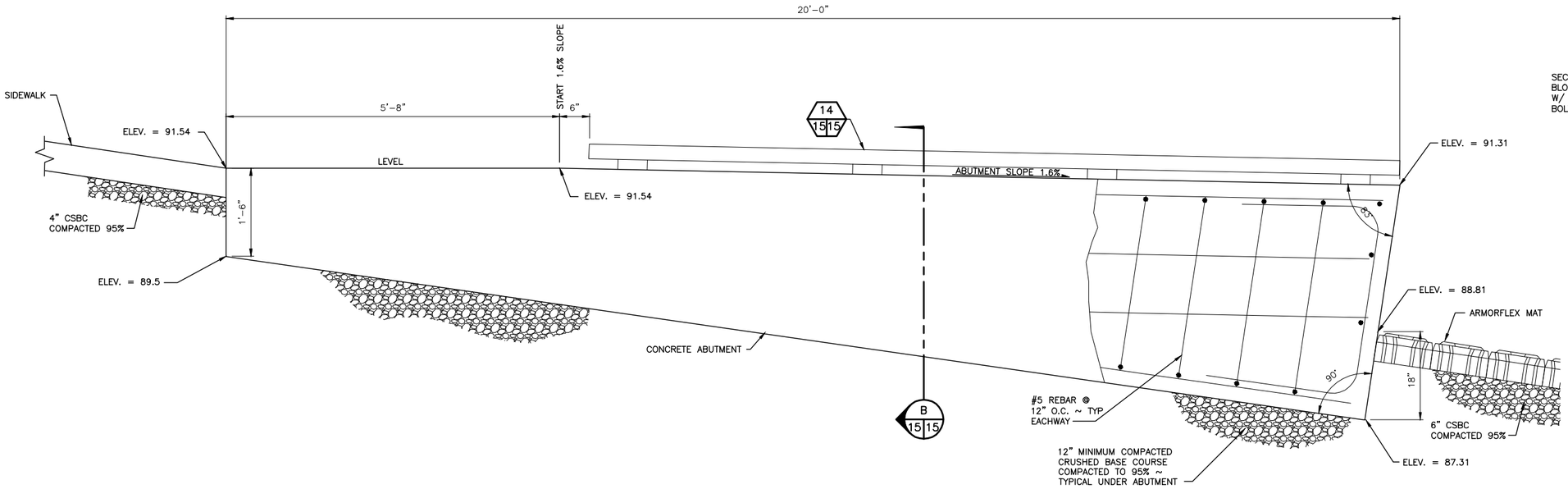
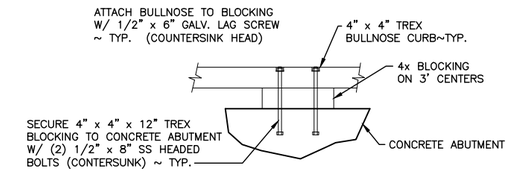
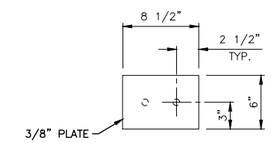


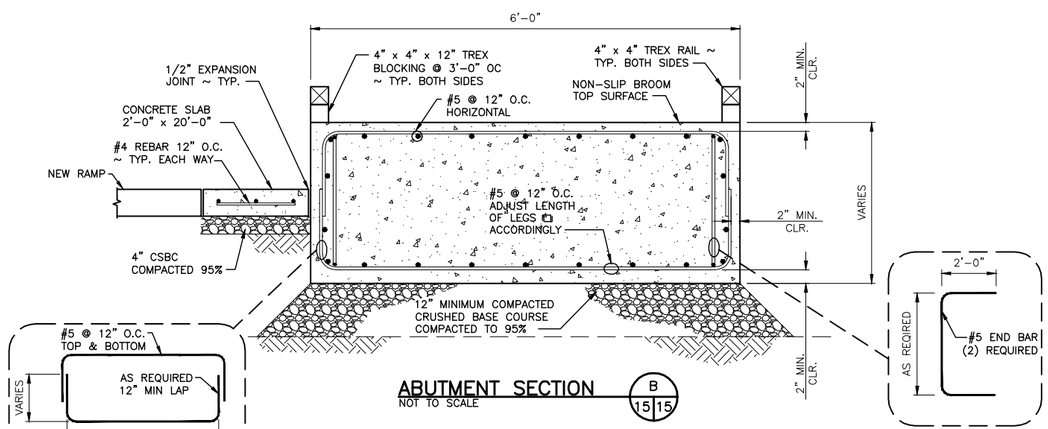

## CONCRETE ABUTMENT
SCALE: 1" = 1'-0"
A 14 15 / A 11 15



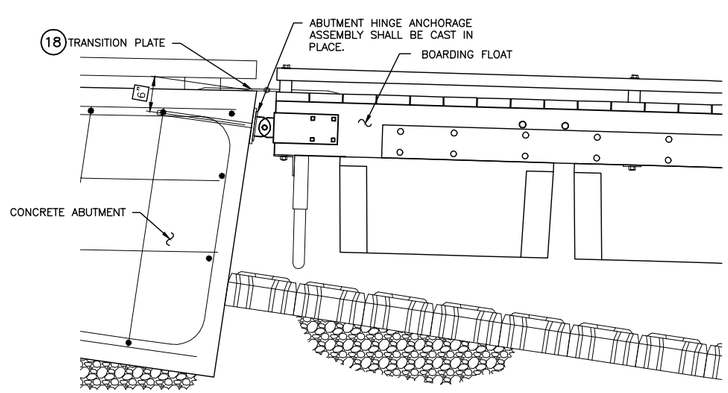

## BULLNOSE CURB DETAIL
NOT TO SCALE
14 15 15



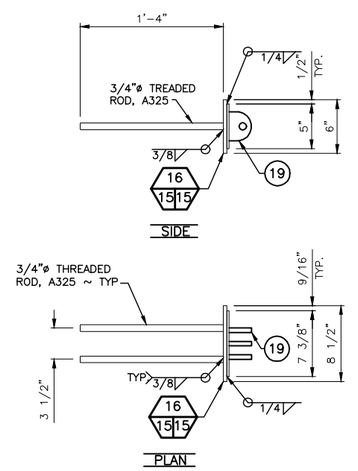

## DETAIL
SCALE: 1" = 1'-0"
16 15 15




## ABUTMENT SECTION
NOT TO SCALE
B 15 15

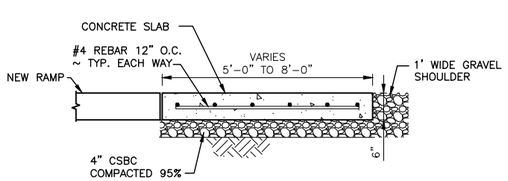



## CONNECTION DETAIL
SCALE: 1" = 1'-0"
15 14 15




## ABUTMENT HINGE ANCHORAGE ASSEMBLY
SCALE: 1-1/2" = 1'-0"
2 – REQ'D

NOTE:
DRILL AND EPOXY 3/4"ø THREADED A325 ROD, WITH HILTI RE500 SD EPOXY




## CONCRETE SLAB SECTION
NOT TO SCALE
C 14 15 / C 8 15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*WASHINGTON STATE*
*DEPARTMENT OF FISH AND WILDLIFE*

SCOTT E. KUEBLER, STATE OF WASHINGTON, 38536, STRUCTURAL ENGINEER, PROFESSIONAL ENGINEER

| SYM | DATE | REVISION DESCRIPTION | BY |
|---|---|---|---|
| | | APPROVED AND RELEASED FOR CONSTRUCTION | |

CHIEF ENGINEER ..... DATE: .....
PROGRAM ..... DATE: .....

0 — 1"
BAR MEASURES
ONE INCH ON
ORIGINAL DRAWINGS

DESIGNED BY M.D.
CHECKED BY S.K.
DRAWN BY J.H.
DATE 02/08/2013

SUTHERLAND LAKE, ACCESS
SITE RENOVATION
ABUTMENT AND FLOATS PLAN

PROJECT NO. CM:A042:12-1
SHEET 15 OF 17


File: I:\112-1\112220 WDFW Access Sites\112220.20 Sutherland Access\Design\ACAD\A04\221c015 (Abutment and Float Plan).dwg TAB:15
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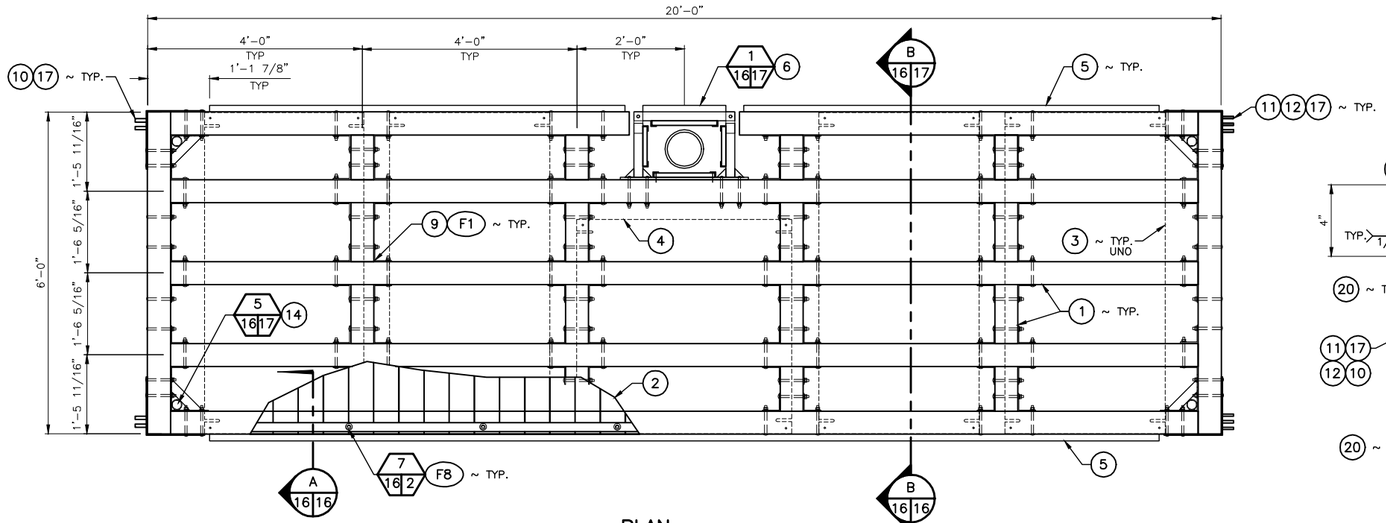
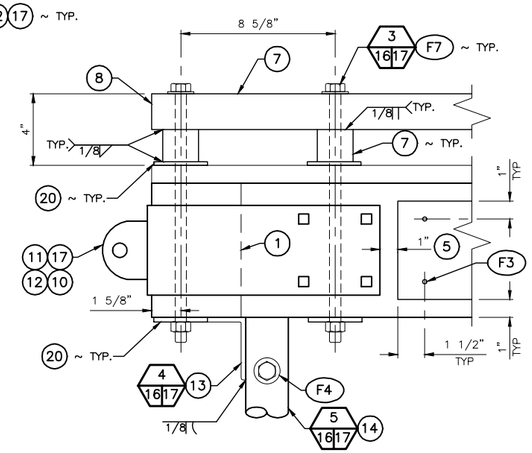
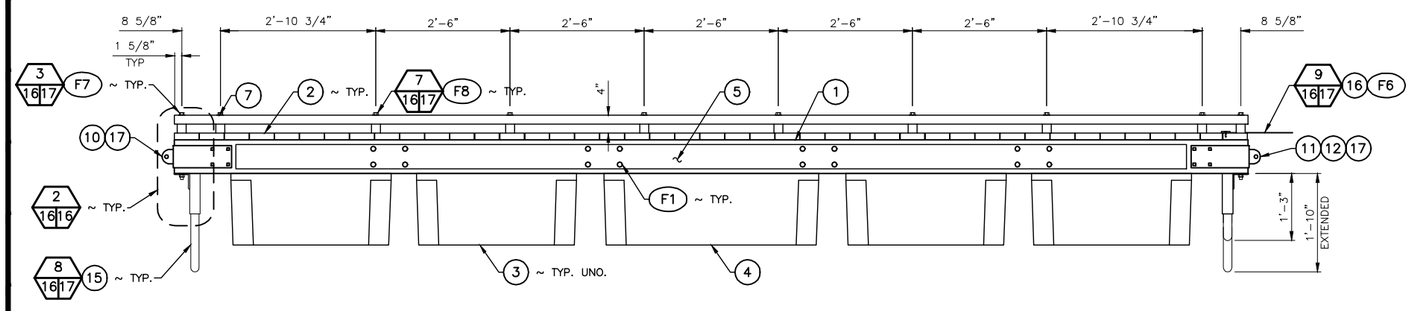



PLAN
SCALE: 3/4" = 1'-0"




DETAIL
SCALE: 3" = 1'-0"




TYPICAL SIDE ELEVATION
SCALE: 3/4" = 1'-0"

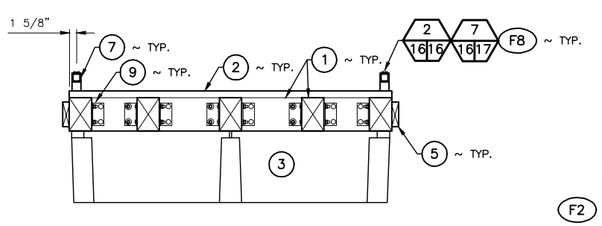
## MATERIALS LIST

| MARK | ITEM | QUANTITY | REMARKS |
|---|---|---|---|
| 1 | GLULAM 22F-V-POC PORT ORFORD CEDAR INDUSTRIAL APPEARANCE ~ 5-1/8 x 7-1/2 | AS REQUIRED | |
| 2 | TREX BRAND WOOD POLYMER COMPOSITE DIMENSIONAL LUMBER DECKING 2 x 6 | AS REQUIRED | |
| 3 | FLOTATION ~ SHOREMASTER FLOAT 3672-16, 3' x 6' x 16" | 4 | |
| 4 | FLOTATION ~ SCOTTCO FLOAT 4848-16, 4' x 4' x 16" | 1 | |
| 5 | DOCK EDGING ~ TREX BRAND WOOD POLYMER COMPOSITE DIMENSIONAL LUMBER DECKING 2 x 6 | AS REQUIRED | |
| 6 | PILE HOOP ASSEMBLY PER DETAIL 6/17 | 1 | |
| 7 | BULL RAIL ~ HSS 2 x 2 x 3/16 ASTM A500 GRADE B | AS REQUIRED | |
| 8 | END CAP WITH WEEP HOLE WELD IN PLACE | AS REQUIRED | |
| 9 | CUSTOM WD-A ANGLE PER DETAIL 6/17 | AS REQUIRED | |
| 10 | CUSTOM WD-HDM HEAVY-DUTY OUTSIDE CORNER MALE PER DETAIL 12/17 | AS REQUIRED | |
| 11 | CUSTOM WD-HDF HEAVY-DUTY OUTSIDE CORNER FEMALE PER DETAIL 13/17 | AS REQUIRED | INTERMEDIATE FLOATS |
| 12 | CUSTOM WD-E OUTSIDE CORNER END SIM DETAIL 13/17 | AS REQUIRED | END LAST FLOAT |
| 13 | ANGLE 3 1/2 x 3 1/2 x 1/4 | AS REQUIRED | BRACING |
| 14 | CUSTOM INSIDE CORNER PIPE HOLDER AS DETAILED | AS REQUIRED | |
| 15 | CUSTOM STANDOFF ASSEMBLY AS DETAILED | AS REQUIRED | |
| 16 | CUSTOM HINGE COVER ~ 1/8" STAINLESS STEEL PLATE AND 0.22" BELTING MATERIAL AS DETAILED | AS REQUIRED | |
| 17 | FOLLANSBEE F-PIN36 AND FW34 3/4" x 6" CONNECTOR PIN AND HITCH CLIP WITH 3/4" FLAT WASHER | AS REQUIRED | |
| 18 | FOLLANSBEE WD-RCP6 TRANSITION PLATE | 1 | ABUTMENT TO FLOAT |
| 19 | FOLLANSBEE WD-HDTF HEAVY DUTY SINGLE T FEMALE | 2 | ABUTMENT TO FLOAT |
| 20 | PLATE 3 x 3 x 3/16, A36 | AS REQUIRED | BASE PLATE |

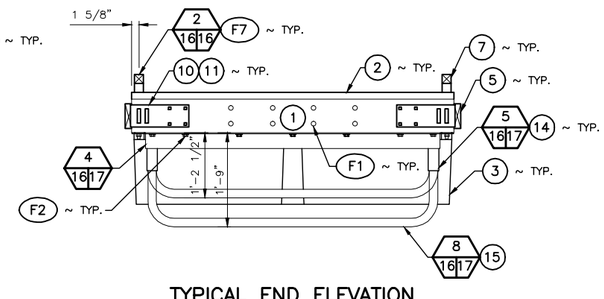
NOTE: 1. QUANTITIES SHOWN ARE PER EACH FLOAT.
2. ALL STEEL SHALL BE HOT DIPPED GALVANIZED, UNLESS NOTED OTHERWISE.

## FASTENERS

| MARK | ITEM | QUANTITY | REMARKS |
|---|---|---|---|
| F1 | FOLLANSBEE 1/2 INCH x 6 1/2 INCH HDG CARRIAGE BOLT SET WITH WASHER AND NUT. | AS REQUIRED | [WD-A ANGLE FASTENING] |
| F2 | 1/2 INCH x 4 INCH LAG SCREW, GALVANIZED | 7 PER END | [BRACE ANGLE FASTENING] |
| F3 | NUMBER 10 x 3 INCH PHILLIPS HEAD STAINLESS STEEL SCREW ~ 2 ROWS AT 12 INCHES ON CENTER. | AS REQUIRED | [DOCK EDGING TO STRINGER] |
| F4 | 5/8 INCH X 3 1/2 INCH HEX HEADED BOLT WITH WASHER AND NUT ~ STAINLESS STEEL. | AS REQUIRED | [STANDOFF ASSEMBLY FASTENING] |
| F5 | NUMBER 10 x 3 INCH PILLIPS HEAD STAINLESS STEEL SCREWS ~ 7 STAGGERED. | AS REQUIRED | [WEAR PLATE FASTENING] |
| F6 | NUMBER 10 x 1 1/2 INCH PHILLIPS HEAD STAINLESS STEEL SCREW ~ COUNTERSUNK AT 4 INCHES ON CENTER. | AS REQUIRED | [BELTING MATERIAL TO DECK] |
| F7 | 1/2 INCH x 12 INCH HEX HEAD STAINLESS STEEL BOLT WITH NUT AND WASHERS AS DETAILED | AS REQUIRED | [RAIL TO STRINGER] |
| F8 | 1/2 INCH x 10 INCH HEX HEAD STAINLESS STEEL LAG SCREW WITH WASHER | AS REQUIRED | [RAIL TO STRINGER] |




SECTION
SCALE: 3/4" = 1'-0"




TYPICAL END ELEVATION
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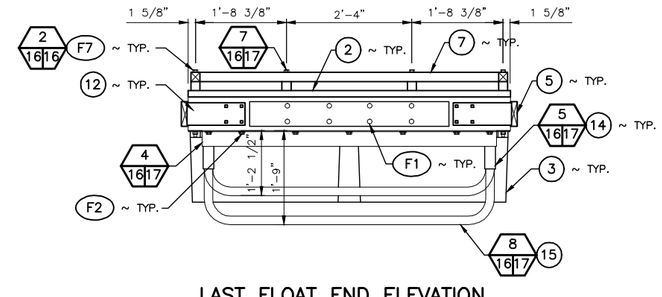
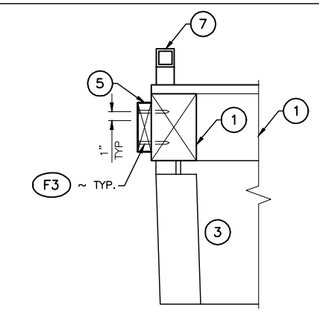



LAST FLOAT END ELEVATION
SCALE: 3/4" = 1'-0"




SECTION
SCALE: 1-1/2" = 1'-0"

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Tacoma, Washington 98407
(253) 396-0150
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WASHINGTON STATE
DEPARTMENT OF FISH AND WILDLIFE

| SYM | DATE | REVISION DESCRIPTION | BY |
|---|---|---|---|

APPROVED AND RELEASED FOR CONSTRUCTION
CHIEF ENGINEER ..... DATE: .....
PROGRAM ..... DATE: .....

0 — 1"
BAR MEASURES ONE INCH ON ORIGINAL DRAWINGS

DESIGNED BY M.D.
CHECKED BY S.K.
DRAWN BY J.H.
DATE 02/08/2013

SUTHERLAND LAKE, ACCESS
SITE RENOVATION
6 X 20 FLOAT FABRICATION

PROJECT NO. CM:A042:12-1
SHEET 16 OF 17

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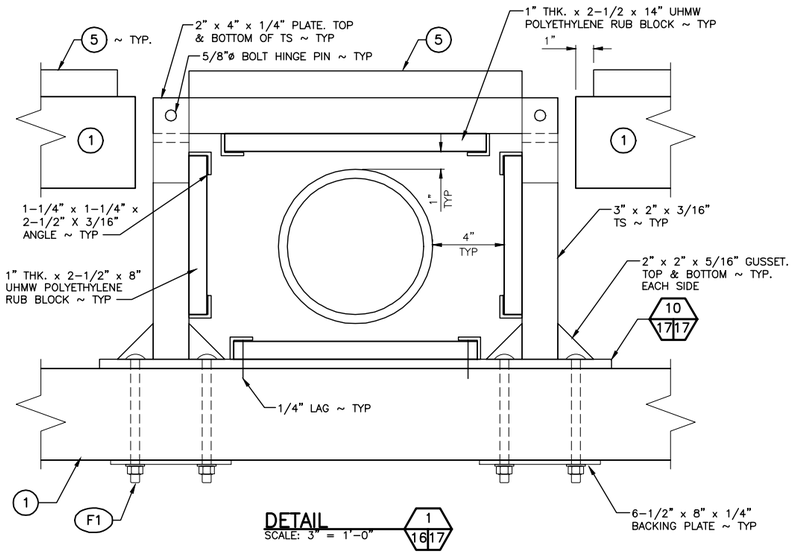


DETAIL 1 (16 17)
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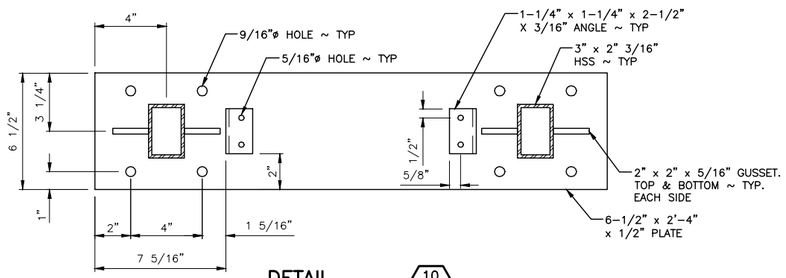


DETAIL 10 (17 17)
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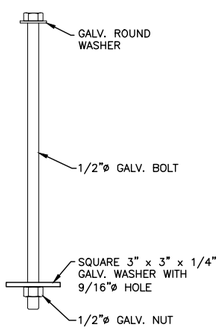
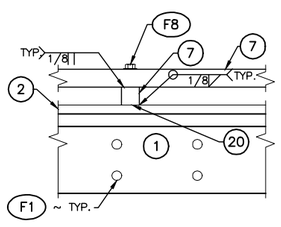
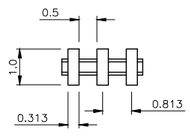



DETAIL 3 (16 17) F7
SCALE: 3" = 1'-0"




DETAIL 7 (16 17)
SCALE: 1 1/2" = 1'-0"




DETAIL 11 (- 17)
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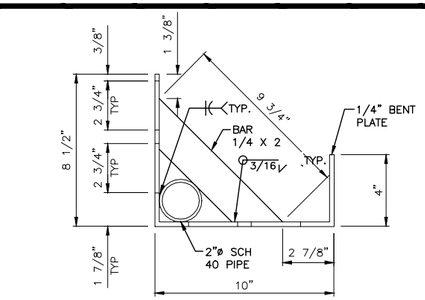
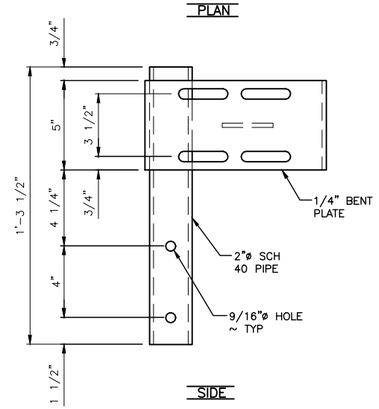
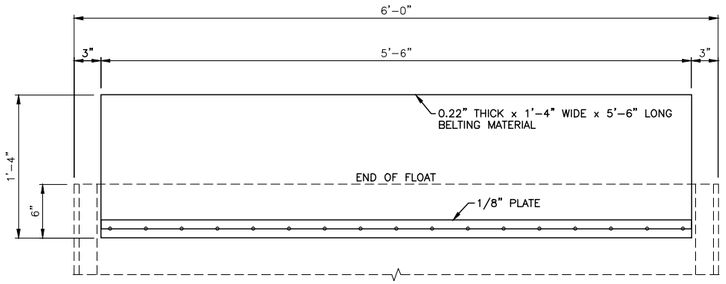



PLAN

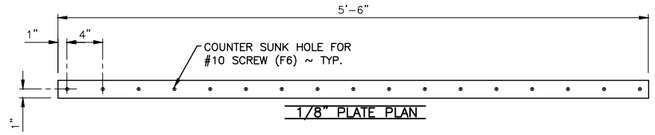



SIDE

DETAIL 5 (16 17)
SCALE: 3" = 1'-0"

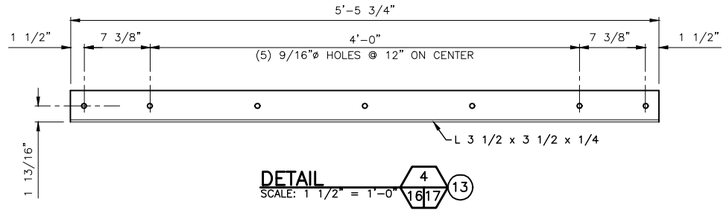



CUSTOM HINGE COVER INSTALLATION PLAN

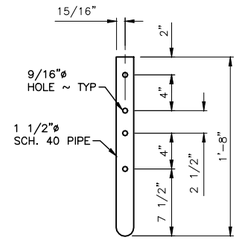



1/8" PLATE PLAN

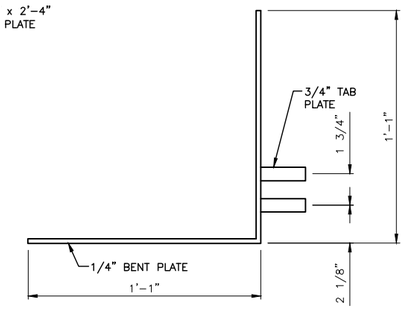
DETAIL 9 (16 17) 16
SCALE: 1 1/2" = 1'-0"




DETAIL 4 (16 17) 13
SCALE: 1 1/2" = 1'-0"




SIDE

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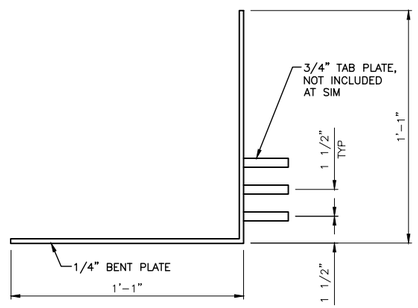


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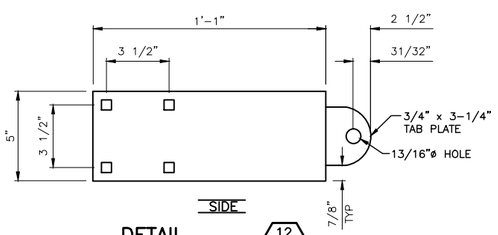
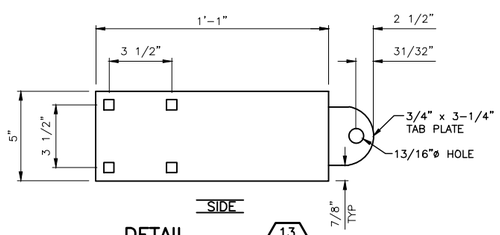


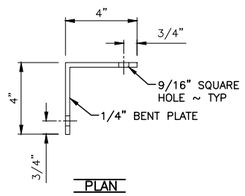

SIDE

DETAIL 12 (16 17)
SCALE: 3" = 1'-0"

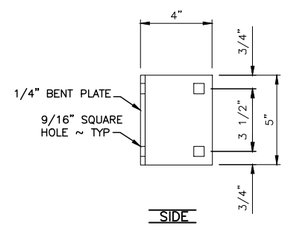



SIDE

DETAIL 13 (16 17)
SCALE: 3" = 1'-0"

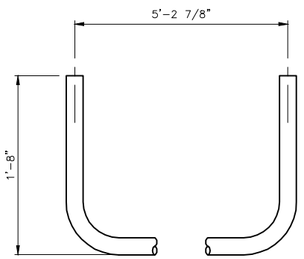



PLAN




SIDE

DETAIL 6 (16 17)
SCALE: 3" = 1'-0"




FRONT

DETAIL 8 (16 17)
SCALE: 1 1/2" = 1'-0"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6 X 20 FLOAT FABRICATION

PROJECT NO. CM:A042:12-1
SHEET 17 OF 17


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