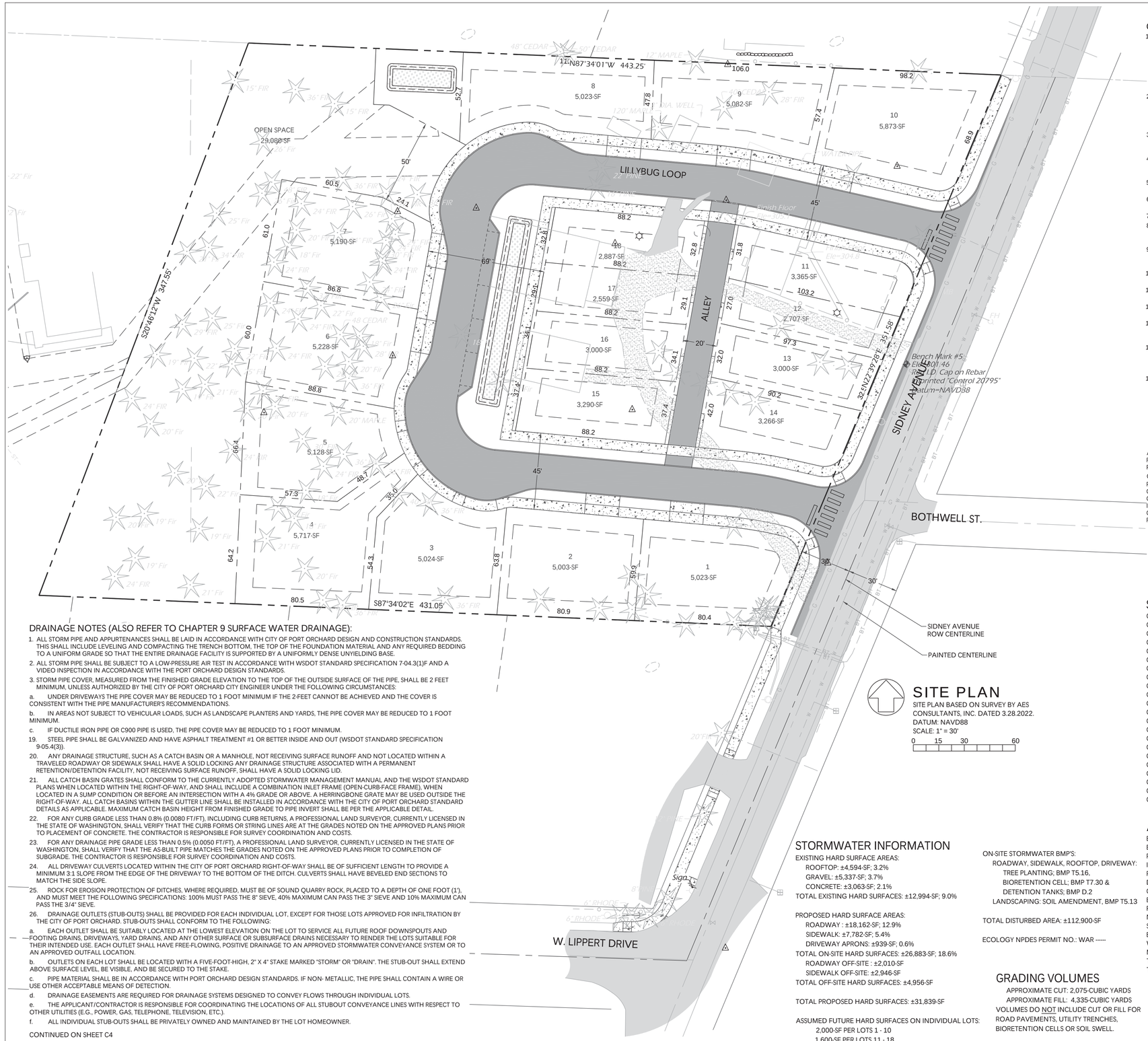


GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL CURRENTLY ADOPTED WSDOT AND APWA SPECIFICATIONS AND PLANS, AND THE CITY OF PORT ORCHARD MUNICIPAL CODE, THE CURRENTLY ADOPTED CITY OF PORT ORCHARD DEVELOPER'S HANDBOOK, THE CURRENTLY ADOPTED SURFACE WATER DESIGN MANUAL AND THE CONDITIONS OF PRELIMINARY SUBDIVISION APPROVAL. IT SHALL BE THE SOLE RESPONSIBILITY OF THE APPLICANT AND THE PROFESSIONAL CIVIL ENGINEER TO CORRECT ANY ERROR, OMISSION, OR VARIATION FROM THE ABOVE REQUIREMENTS FOUND IN THESE PLANS. ALL CORRECTIONS SHALL BE AT NO ADDITIONAL COST OR LIABILITY TO THE CITY OF PORT ORCHARD.
2. THE DESIGN ELEMENTS WITHIN THESE PLANS HAVE BEEN REVIEWED ACCORDING TO THE PORT ORCHARD DESIGN STANDARDS. SOME ELEMENTS MAY HAVE BEEN OVERLOOKED OR MISSED BY THE CITY OF PORT ORCHARD CITY ENGINEER. ANY DEVIATION FROM ADOPTED STANDARDS IS NOT ALLOWED UNLESS SPECIFICALLY APPROVED BY THE CITY OF PORT ORCHARD CITY ENGINEER, PRIOR TO CONSTRUCTION.
3. APPROVAL OF THESE ENGINEERING PLANS SUCH AS FOR ROADS, GRADING, OR DRAINAGE DOES NOT CONSTITUTE AN APPROVAL OF ANY OTHER DESIGN (E.G., WATER, SEWER, GAS, ELECTRICAL, ETC.).
4. BEFORE ANY CONSTRUCTION OR DEVELOPMENT ACTIVITY, A PRECONSTRUCTION MEETING MUST BE HELD BETWEEN THE CITY OF PORT ORCHARD PUBLIC WORKS DEPARTMENT, THE APPLICANT AND THE APPLICANT'S CONSTRUCTION REPRESENTATIVE.
5. PROOF OF LIABILITY INSURANCE SHALL BE SUBMITTED TO THE CITY OF PORT ORCHARD PRIOR TO THE PRECONSTRUCTION MEETING.
6. A COPY OF THESE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
7. CONSTRUCTION NOISE SHALL COMPLY WITH THE CURRENT POMC SECTION 9.24.050.
8. IT SHALL BE THE APPLICANT /CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL RIGHT-OF-WAY PERMITS AND CONSTRUCTION EASEMENTS NECESSARY BEFORE INITIATING OFF-SITE WORK WITHIN A CITY OF PORT ORCHARD STREET RIGHT-OF-WAY.
9. FRANCHISED UTILITIES OR OTHER INSTALLATIONS THAT ARE NOT SHOWN ON THESE APPROVED PLANS SHALL NOT BE CONSTRUCTED UNLESS AN APPROVED SET OF PLANS IS SUBMITTED TO THE CITY OF PORT ORCHARD PRIOR TO CONSTRUCTION.
10. THE VERTICAL DATUM SHALL BE NAVD 1988 AND THE HORIZONTAL DATUM SHALL BE NAD 1983 HARN STATE PLANE WASHINGTON NORTH FIPS 4601 FEET.
11. GROUNDWATER SYSTEM CONSTRUCTION SHALL BE WITHIN A RIGHT-OF-WAY OR APPROPRIATE DRAINAGE EASEMENT, BUT NOT UNDERNEATH THE ROADWAY SECTION.
12. ALL UTILITY TRENCHES SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE CITY OF PORT ORCHARD STANDARDS.
13. ALL ROADWAY SUBGRADE SHALL BE BACKFILLED, COMPACTED TO 95% MAXIMUM DENSITY AND PREPARED FOR SURFACING IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATION 2- 06.3.
14. OPEN CUTTING OF EXISTING ROADWAYS IS NOT ALLOWED UNLESS SPECIFICALLY APPROVED BY THE CITY OF PORT ORCHARD CITY ENGINEER AND NOTED ON THESE APPROVED PLANS. ANY OPEN CUT SHALL BE RESTORED IN ACCORDANCE WITH THE CITY OF PORT ORCHARD STANDARD SPECIFICATIONS.
15. 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. REFER TO "TRAFFIC CONTROL," OF THE WSDOT STANDARD SPECIFICATIONS SHALL APPLY IN ITS ENTIRETY. TRAFFIC CONTROL PLANS SHALL FOLLOW THE CURRENTLY ADOPTED MUTCD MANUAL AS APPLICABLE.

TO PROTECT SIGNIFICANT TREES FROM THE IMPACTS OF THE PROPOSED DEVELOPMENT, THE APPLICANT SHALL PROVIDE THE BEST PROTECTION FOR SIGNIFICANT TREES PER THE REGULATIONS. AT A MINIMUM, ANY SIGNIFICANT TREES TO BE RETAINED SHALL BE FENCED TWO FEET OUTWARD FROM THE IDENTIFIED DRIP LINE. TREES THAT SUSTAIN DAMAGE DURING CONSTRUCTION SHALL BE REPLACED PURSUANT TO POMC. A REPRESENTATIVE OF THE CITY OF PORT ORCHARD DCD STAFF SHALL VERIFY PROTECTIVE FENCING PLACEMENT PER THIS CONDITION PRIOR TO ISSUANCE OF A NOTICE TO PROCEED FOR GRADING AND CLEARING. THE CITY SHALL INSPECT FOR COMPLIANCE WITH THE TREE PLAN PRIOR TO A FINAL INSPECTION. THE INSPECTION SHALL ALSO EVALUATE THE CONDITION OF RETAINED TREES AND ANY AND ALL CORRECTIONS WILL BE REQUIRED TO BE COMPLETED PRIOR TO A FINAL INSPECTION AND RELEASE OF ANY POST FINANCIAL GUARANTEES FOR THE SITE.

LEGEND

- EXISTING PROPERTY LINES
- EXISTING EASEMENT
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- SS — EXISTING SANITARY SEWER
- W — EXISTING WATER
- SD — EXISTING STORM DRAIN
- PROPOSED PAVEMENT
- PROPOSED SIDEWALK
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- SS — PROPOSED SANITARY SEWER
- W — PROPOSED WATER
- PROPOSED SWALE
- SD — PROPOSED STORM DRAIN
- PROPOSED CATCH BASIN
- PROPOSED FIRE HYDRANT

PARCEL INFORMATION

TAX ID: 022301-2-059-2002
ADDRESS: 1912 SIDNEY AVE
AREA: 3.32-ACRES, APPROX. 144,619-SF

ZONING: R-2 POMC 20.34.020
MAX. HARD SURFACE COVERAGE: 70% OF SITE
PRINCIPLE BUILDING SETBACKS:
- PRIMARY STREET: 10-FT
- SIDE STREET: 10-FT
- SIDE INTERIOR; 5-FT (EXCEPT ATTACHED HOUSING TYPES WHICH DO NOT REQUIRE A SIDE INTERIOR SETBACK)
- REAR: 10-FT (REAR SETBACK FOR ACCESSORY STRUCTURE ABUTTING AN ALLEY MAY BE REDUCED TO 2-FT)

BUILDING HEIGHT:
- PRINCIPAL BUILDING: 3 STORIES / 35-FT
- ACCESSORY STRUCTURE: 24-FT MAX.

SINGLE FAMILY ATTACHED:
- MINIMUM LOT AREA: 2,500-SF
- MINIMUM LOT WIDTH:
  - 30-FT ACCESS ON PRIMARY STREET
  - 20-FT ACCESS NOT ON PRIMARY STREET

SINGLE FAMILY DETACHED:
- MINIMUM LOT AREA: 5,000-SF ACCESS ON PRIMARY STREET
  3,000-SF ACCESS NOT ON PRIMARY STREET
- MINIMUM LOT WIDTH:
  - 50-FT ACCESS ON PRIMARY STREET
  - 30-FT ACCESS NOT ON PRIMARY STREET

OPEN SPACE REQUIRED: 300-SF/DWELLING UNIT * 18-DU's = 5,400-SF MIN.
OPEN SPACE PROVIDED: 28,910-SF

CRITICAL AREAS: KITSAP COUNTY PARCEL SEARCH SHOWS A MODERATE EROSION HAZARD AREA IN THE SITE'S SW CORNER.
OUTSIDE CRITICAL DRAINAGE AREAS & AQUIFER RECHARGE AREAS.

DRAINAGE NOTES (ALSO REFER TO CHAPTER 9 SURFACE WATER DRAINAGE):

1. ALL STORM PIPE AND APPURTENANCES SHALL BE LAID IN ACCORDANCE WITH CITY OF PORT ORCHARD DESIGN AND CONSTRUCTION STANDARDS. THIS SHALL INCLUDE LEVELING AND COMPACTING THE TRENCH BOTTOM, THE TOP OF THE FOUNDATION MATERIAL AND ANY REQUIRED BEDDING TO A UNIFORM GRADE SO THAT THE ENTIRE DRAINAGE FACILITY IS SUPPORTED BY A UNIFORMLY DENSE UNYIELDING BASE.
2. ALL STORM PIPE SHALL BE SUBJECT TO A LOW-PRESSURE AIR TEST IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATION 7-04.3(1)F AND A VIDEO INSPECTION IN ACCORDANCE WITH THE PORT ORCHARD DESIGN STANDARDS.
3. STORM PIPE COVER, MEASURED FROM THE FINISHED GRADE ELEVATION TO THE TOP OF THE OUTSIDE SURFACE OF THE PIPE, SHALL BE 2 FEET MINIMUM, UNLESS AUTHORIZED BY THE CITY OF PORT ORCHARD CITY ENGINEER UNDER THE FOLLOWING CIRCUMSTANCES:

a. UNDER DRIVEWAYS THE PIPE COVER MAY BE REDUCED TO 1 FOOT MINIMUM IF THE 2-FEET CANNOT BE ACHIEVED AND THE COVER IS CONSISTENT WITH THE PIPE MANUFACTURER'S RECOMMENDATIONS.

b. IN AREAS NOT SUBJECT TO VEHICULAR LOADS, SUCH AS LANDSCAPE PLANTERS AND YARDS, THE PIPE COVER MAY BE REDUCED TO 1 FOOT MINIMUM.

c. IF DUCTILE IRON PIPE OR C900 PIPE IS USED, THE PIPE COVER MAY BE REDUCED TO 1 FOOT MINIMUM.

19. STEEL PIPE SHALL BE GALVANIZED AND HAVE ASPHALT TREATMENT #1 OR BETTER INSIDE AND OUT (WSDOT STANDARD SPECIFICATION 9-05.4(3)).
20. ANY DRAINAGE STRUCTURE, SUCH AS A CATCH BASIN OR A MANHOLE, NOT RECEIVING SURFACE RUNOFF AND NOT LOCATED WITHIN A TRAVELED ROADWAY OR SIDEWALK SHALL HAVE A SOLID LOCKING ANY DRAINAGE STRUCTURE ASSOCIATED WITH A PERMANENT RETENTION/DETENTION FACILITY, NOT RECEIVING SURFACE RUNOFF, SHALL HAVE A SOLID LOCKING LID.
21. ALL CATCH BASIN GRATES SHALL CONFORM TO THE CURRENTLY ADOPTED STORMWATER MANAGEMENT MANUAL AND THE WSDOT STANDARD PLANS WHEN LOCATED WITHIN THE RIGHT-OF-WAY, AND SHALL INCLUDE A COMBINATION INLET FRAME (OPEN-CURB-FACE FRAME). WHEN LOCATED IN A SUMP CONDITION OR BEFORE AN INTERSECTION WITH A 4% GRADE OR ABOVE. A HERRINGBONE GRATE MAY BE USED OUTSIDE THE RIGHT-OF-WAY. ALL CATCH BASINS WITHIN THE GUTTER LINE SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF PORT ORCHARD STANDARD DETAILS AS APPLICABLE. MAXIMUM CATCH BASIN HEIGHT FROM FINISHED GRADE TO PIPE INVERT SHALL BE PER THE APPLICABLE DETAIL.
22. FOR ANY CURB GRADE LESS THAN 0.8% (0.0080 FT/FT), INCLUDING CURB RETURNS, A PROFESSIONAL LAND SURVEYOR, CURRENTLY LICENSED IN THE STATE OF WASHINGTON, SHALL VERIFY THAT THE CURB FORMS OR STRING LINES ARE AT THE GRADES NOTED ON THE APPROVED PLANS PRIOR TO PLACEMENT OF CONCRETE. THE CONTRACTOR IS RESPONSIBLE FOR SURVEY COORDINATION AND COSTS.
23. FOR ANY DRAINAGE PIPE GRADE LESS THAN 0.5% (0.0050 FT/FT), A PROFESSIONAL LAND SURVEYOR, CURRENTLY LICENSED IN THE STATE OF WASHINGTON, SHALL VERIFY THAT THE AS-BUILT PIPE MATCHES THE GRADES NOTED ON THE APPROVED PLANS PRIOR TO COMPLETION OF SUBGRADE. THE CONTRACTOR IS RESPONSIBLE FOR SURVEY COORDINATION AND COSTS.
24. ALL DRIVEWAY CULVERTS LOCATED WITHIN THE CITY OF PORT ORCHARD RIGHT-OF-WAY SHALL BE OF SUFFICIENT LENGTH TO PROVIDE A MINIMUM 3:1 SLOPE FROM THE EDGE OF THE DRIVEWAY TO THE BOTTOM OF THE DITCH. CULVERTS SHALL HAVE BEVELED END SECTIONS TO MATCH THE SIDE SLOPE.
25. ROCK FOR EROSION PROTECTION OF DITCHES, WHERE REQUIRED, MUST BE OF SOUND QUARRY ROCK, PLACED TO A DEPTH OF ONE FOOT (1'), AND MUST MEET THE FOLLOWING SPECIFICATIONS: 100% MUST PASS THE 8" SIEVE, 40% MAXIMUM CAN PASS THE 3" SIEVE AND 10% MAXIMUM CAN PASS THE 3/4" SIEVE.
26. DRAINAGE OUTLETS (STUB-OUTS) SHALL BE PROVIDED FOR EACH INDIVIDUAL LOT, EXCEPT FOR THOSE LOTS APPROVED FOR INFILTRATION BY THE CITY OF PORT ORCHARD. STUB-OUTS SHALL CONFORM TO THE FOLLOWING:

a. EACH OUTLET SHALL BE SUITABLY LOCATED AT THE LOWEST ELEVATION ON THE LOT TO SERVICE ALL FUTURE ROOF DOWNSPOUTS AND FOOTING DRAINS, DRIVEWAYS, YARD DRAINS, AND ANY OTHER SURFACE OR SUBSURFACE DRAINS NECESSARY TO RENDER THE LOTS SUITABLE FOR THEIR INTENDED USE. EACH OUTLET SHALL HAVE FREE-FLOWING, POSITIVE DRAINAGE TO AN APPROVED STORMWATER CONVEYANCE SYSTEM OR TO AN APPROVED OUTFALL LOCATION.

b. OUTLETS ON EACH LOT SHALL BE LOCATED WITH A FIVE-FOOT-HIGH, 2" X 4" STAKE MARKED "STORM" OR "DRAIN". THE STUB-OUT SHALL EXTEND ABOVE SURFACE LEVEL, BE VISIBLE, AND BE SECURED TO THE STAKE.

c. PIPE MATERIAL SHALL BE IN ACCORDANCE WITH PORT ORCHARD DESIGN STANDARDS. IF NON- METALLIC, THE PIPE SHALL CONTAIN A WIRE OR USE OTHER ACCEPTABLE MEANS OF DETECTION.

d. DRAINAGE EASEMENTS ARE REQUIRED FOR DRAINAGE SYSTEMS DESIGNED TO CONVEY FLOWS THROUGH INDIVIDUAL LOTS.

e. THE APPLICANT/CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE LOCATIONS OF ALL STUBOUT CONVEYANCE LINES WITH RESPECT TO OTHER UTILITIES (E.G., POWER, GAS, TELEPHONE, TELEVISION, ETC.).

f. ALL INDIVIDUAL STUB-OUTS SHALL BE PRIVATELY OWNED AND MAINTAINED BY THE LOT HOMEOWNER.

CONTINUED ON SHEET C4

SITE PLAN

SITE PLAN BASED ON SURVEY BY AES CONSULTANTS, INC. DATED 3.28.2022.
DATUM: NAVD88
SCALE: 1" = 30'
0 15 30 60

SHEET LIST

ABBREVIATIONS

EOP = EDGE OF PAVEMENT
EX. = EXISTING
PRO. = PROPOSED
IE = INVERT ELEVATION
PVC = POLYVINYL CHLORIDE PIPE
DIP = DUCTILE IRON PIPE
CPP = LINED CORRUGATED POLYETHYLENE PIPE
ELE = ELEVATION
FE = FLOOR ELEVATION
N = NORTH
S = SOUTH
E EAST
W = WEST
MIN. = MINIMUM
TYP. = TYPICAL
TBM = TEMPORARY BENCHMARK

STORMWATER INFORMATION

EXISTING HARD SURFACE AREAS:
- ROOFTOP: ±4,594-SF; 3.2%
- GRAVEL: ±5,337-SF; 3.7%
- CONCRETE: ±3,063-SF; 2.1%

TOTAL EXISTING HARD SURFACES: ±12,994-SF; 9.0%

PROPOSED HARD SURFACE AREAS:
- ROADWAY : ±18,162-SF; 12.9%
- SIDEWALK: ±7,782-SF; 5.4%
- DRIVEWAY APRONS: ±939-SF; 0.6%

TOTAL ON-SITE HARD SURFACES: ±26,883-SF; 18.6%
- ROADWAY OFF-SITE : ±2,010-SF
- SIDEWALK OFF-SITE: ±2,946-SF

TOTAL OFF-SITE HARD SURFACES: ±4,956-SF

TOTAL PROPOSED HARD SURFACES: ±31,839-SF

ASSUMED FUTURE HARD SURFACES ON INDIVIDUAL LOTS:
- 2,000-SF PER LOTS 1 - 10
- 1,600-SF PER LOTS 11 - 18

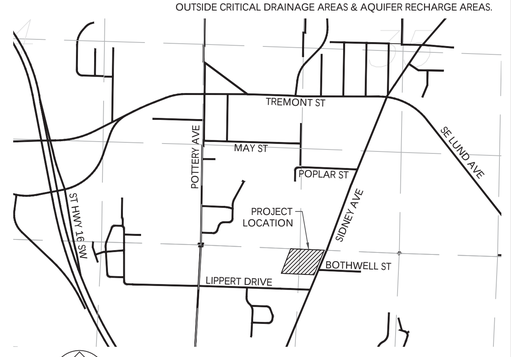
ON-SITE STORMWATER BMP'S:
- ROADWAY, SIDEWALK, ROOFTOP, DRIVEWAY: TREE PLANTING; BMP T5.16, BIORETENTION CELL; BMP T7.30 & DETENTION TANKS; BMP D.2
- LANDSCAPING: SOIL AMENDMENT, BMP T5.13

TOTAL DISTURBED AREA: ±112,900-SF

ECOLOGY NPDES PERMIT NO.: WAR -----

GRADING VOLUMES

APPROXIMATE CUT: 2,075-CUBIC YARDS
APPROXIMATE FILL: 4,335-CUBIC YARDS
VOLUMES DO NOT INCLUDE CUT OR FILL FOR ROAD PAVEMENTS, UTILITY TRENCHES, BIORETENTION CELLS OR SOIL SWELL.



VICINITY MAP

TAX ID: 022301-2-059-2002
NE & NW ¼ OF NW ¼ SECTION 2 TOWNSHIP 23 NORTH RANGE 1 EAST
0 500 1,000 2,000
SCALE: 1" = 1,000'

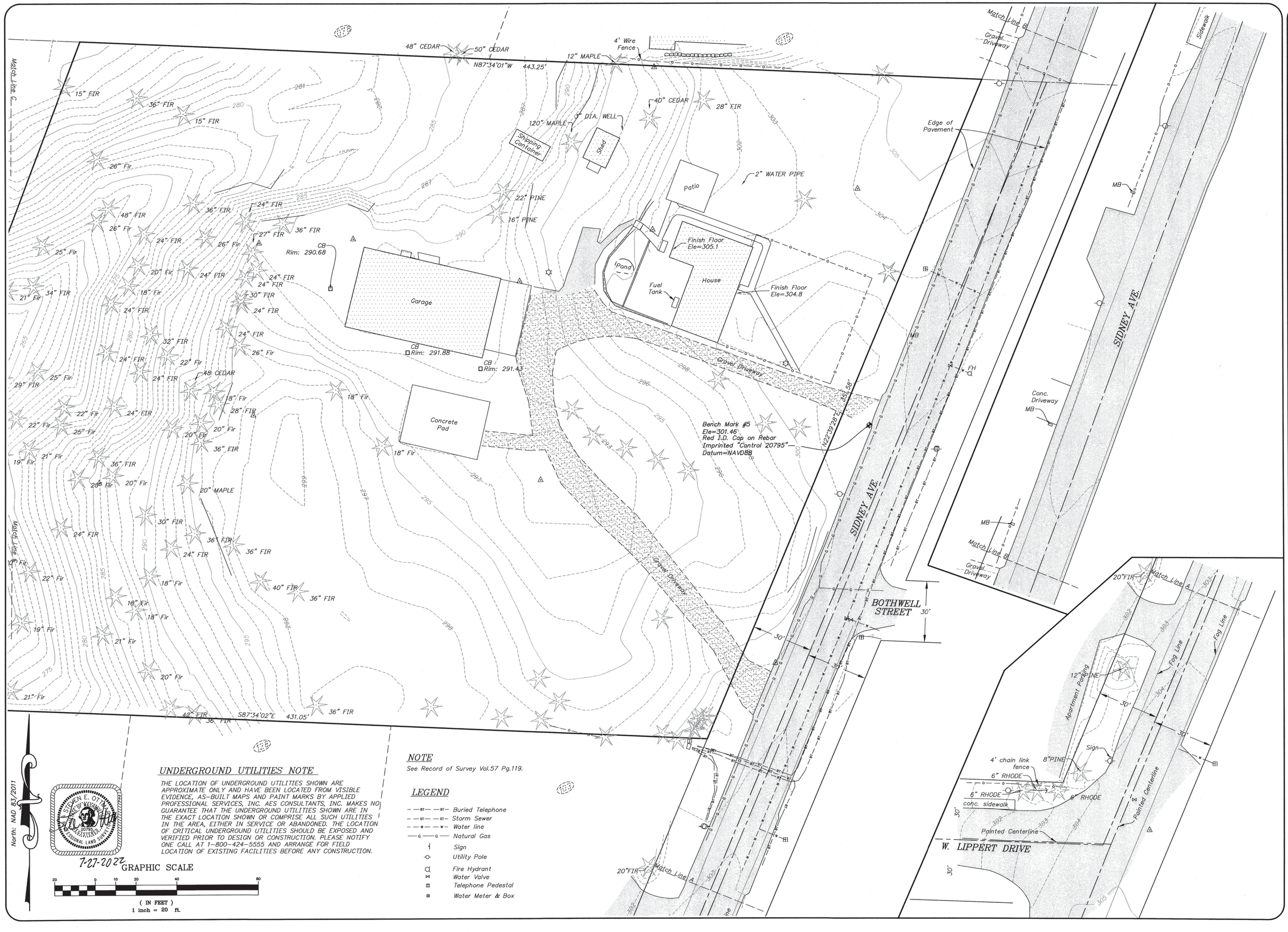
OVERALL SITE PLAN & GENERAL NOTES
WINDWARD ESTATES - 1912 SIDNEY AVENUE
PLAT UTILITY SUBMITTAL

KELSEY E. LAUGHLIN — STATE OF WASHINGTON — 48830 — REGISTERED PROFESSIONAL ENGINEER — 12/9/2022

SEABOLD
ENGINEERING LLC
PO Box 445 Indianola, WA 98342
360.930.4668 Engineer@SeaboldEng.com

date: 12/9/2022
designed: k. laughlin
drawn:
checked: k. laughlin
job no.: MP10.12

PAUL & MARCIA BERG
10813 32ND STREET CT NW
GIG HARBOR, WA 98335
253.307.0486
mpbergs@comcast.net



UNDERGROUND UTILITIES NOTE

THE LOCATION OF UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE ONLY AND HAVE BEEN LOCATED FROM VISIBLE EVIDENCE, AS-BUILT MAPS AND PAINT MARKS BY APPLIED PROFESSIONAL SERVICES, INC. AES CONSULTANTS, INC. MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION SHOWN OR COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE LOCATION OF CRITICAL UNDERGROUND UTILITIES SHOULD BE EXPOSED AND VERIFIED PRIOR TO DESIGN OR CONSTRUCTION. PLEASE NOTIFY ONE CALL AT 1-800-424-5555 AND ARRANGE FOR FIELD LOCATION OF EXISTING FACILITIES BEFORE ANY CONSTRUCTION.

NOTE

See Record of Survey Vol.57 Pg.119.

LEGEND

- —ST— —ST— Buried Telephone
- —ST— —ST— Storm Sewer
- —W— —W— Water line
- —G— —G— Natural Gas
- Sign
- Utility Pole
- Fire Hydrant
- Water Valve
- Telephone Pedestal
- Water Meter & Box

STEVEN E. OTT — 20795 — REGISTERED PROFESSIONAL LAND SURVEYOR

7-27-2022

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

REV.	DATE	BY	DESCRIPTION
1	3/22	B.J.M.	EXTEND TOPO SOUTH
2	7/22	B.J.M.	EXTEND TOPO

DATE 7/07/22
DRAWN B.J.M.
CHECKED S.E.O.
DWG. FILE BASE

TOPOGRAPHY MAP

SIDNEY AVENUE
PORT ORCHARD, WASHINGTON
For: M&P Builders, Inc.

AES CONSULTANTS, INC.
P.O. BOX 930 / 3472 N.W. LOWELL • SILVERDALE, WA. 98383 • (360)692-6400

JOB NO. 7081

SHEET 1/2

18"cmp
IE=229.00

CB 1
Rim: 235.05
IE=0.00 18" N.
IE=231.30 18" cmp SE

18"cmp
IE=231.35

12"cmp
IE=230.99

6' Chain Link Fence

SSMH
Rim: 243.81
IE=233.41 ctr trough NW-SE-S

CB
Rim: 242.84
IE=238.94 8" cmp S

4' Chain Link Fence

sidewalk

Bench Mark #5002
Ele=240.98
"MAG" nail with
I.D. washer
Datum=NAVD88

CB
Rim: 241.19
IE=237.34 12" cmp W
IE=237.19 12" cmp E

CB
Rim: 239.86
IE=234.16 12" cmp W
IE=234.26 12" cmp N
IE=234.14 12" cmp E
IE=235.01 12" cmp S

Edge of Pavement

FH

PV

CB
Rim: 243.64

CB
Rim: 242.48
IE=236.76 12" cmp W
IE=237.11 8" cmp N
IE=236.96 8" cmp E

CB
Rim: 250.33
IE=240.61 8"cmp W
IE=240.85 8" cmp S

CB
Rim: 250.32

Shed

Office Building

(122)
HOUSING KITSAP
(HERITAGE APTS.)

CB
Rim: 251.03
IE=245.34 6" pvc SW
IE=244.90 8" cmp N
IE=244.90 8" cmp SE

Match Line

48" CEDAR

15" FIR
36" FIR
15" FIR
26" Fir
48" FIR
26" Fir
36" FIR
24" FIR
27" FIR
36" FIR
25" Fir
24" FIR
26" Fir
CB
Rim: 290.68
20" Fir
24" FIR
24" FIR
21" Fir
34" FIR
18" Fir
30" FIR
24" FIR
24" FIR
32" FIR
24" FIR
22" Fir
48" CEDAR
24" FIR
26" Fir
25" Fir
29" FIR
18" Fir
28" FIR
18" Fir
19" Fir
22" Fir
22" Fir
24" FIR
20" Fir
20" Fir
25" Fir
36" FIR
19" Fir
21" Fir
36" FIR
24" FIR
20" Fir
20" Fir
20" MAPLE
20" Fir
30" FIR
24" FIR
36" FIR
36" FIR
24" FIR
20" Fir
22" Fir
18" Fir
40" FIR
36" FIR
18" Fir
18" Fir
20" Fir
19" Fir
19" Fir
21" Fir
19" Fir
20" Fir
24" FIR
21" Fir
42" FIR
36" FIR
36" FIR

Garage

CB
Rim: 291.88

Concrete Pad

S20°46'12"W 347.35'

S87°34'02"E 431.05'

(119)

(120)

NOTE
See Record of Survey Vol.57 Pg.119.

LEGEND

- Buried Telephone
- Storm Sewer
- Water line
- Natural Gas
- Sign
- Utility Pole
- Fire Hydrant
- Water Valve
- Telephone Pedestal
- Water Meter & Box

NORTH: NAD83/2011

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

STEVEN E. OTTA
CERTIFICATE NUMBER
REGISTERED
PROFESSIONAL LAND SURVEYOR
7-27-2022

'INDERGROUND UTILITIES NOTE

'HE LOCATION OF UNDERGROUND UTILITIES SHOWN ARE
\PPROXIMATE ONLY AND HAVE BEEN LOCATED FROM VISIBLE
'IDENCE, AS-BUILT MAPS AND RECORDS.

NOTE
See Record o

REV.	DATE	BY	DESCRIPTION
1	7/22	B.J.M.	EXTEND TOPO

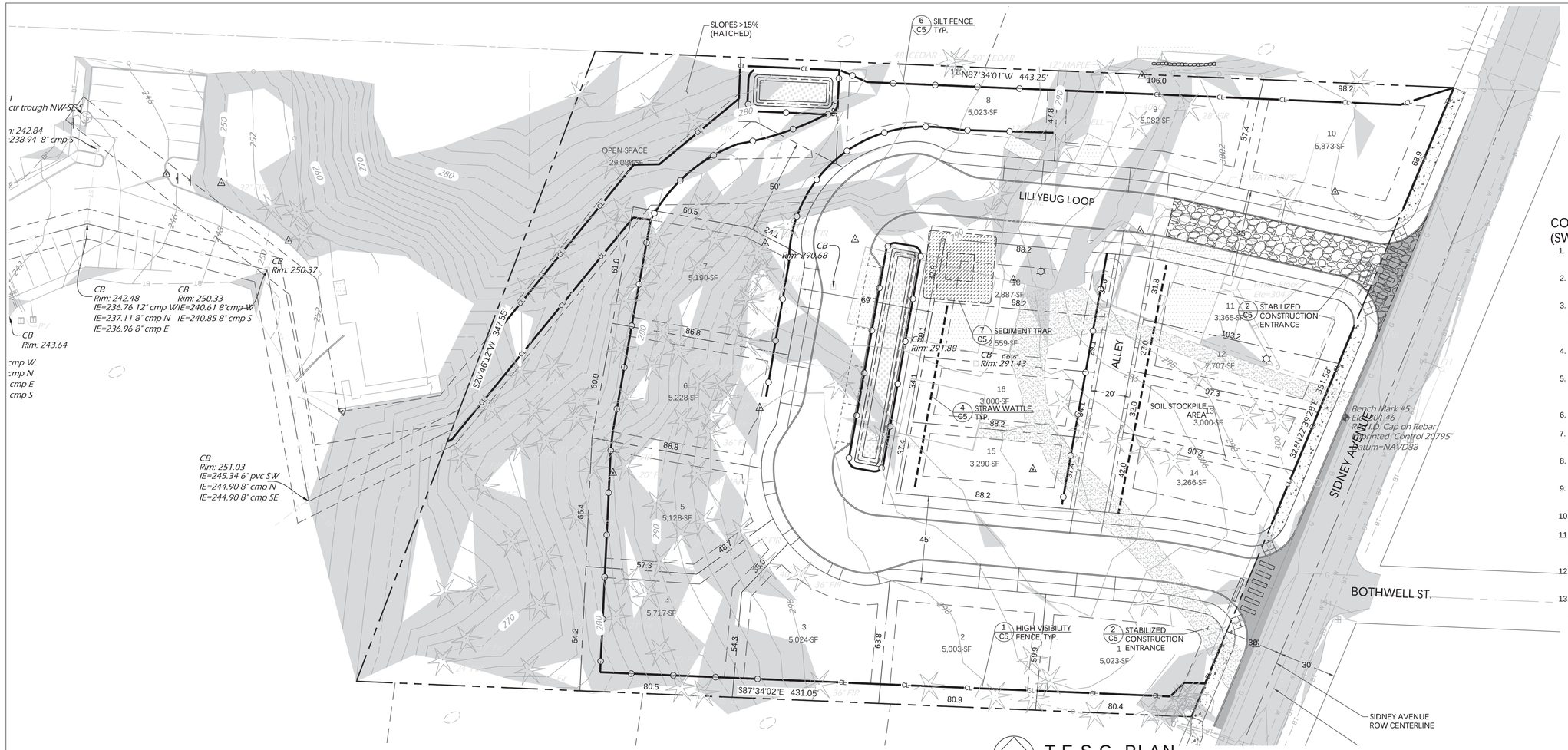
DATE 7/07/22
DRAWN B.J.M.
CHECKED S.E.O.
DWG. FILE BASE

TOPOGRAPHY MAP

SIDNEY AVENUE
PORT ORCHARD, WASHINGTON
For: M&P Builders, Inc.

AES CONSULTANTS, INC.
P.O. BOX 930 / 3472 N.W. LOWELL • SILVERDALE, WA. 98383 • (360)692-6400

JOB NO.
7081
SHEET
2/2



T.E.S.C. PLAN

SITE PLAN BASED ON SURVEY BY AES CONSULTANTS, INC. DATED 3.28.2022.
DATUM: NAVD88
SCALE: 1" = 30'

0 15 30 60

CONSTRUCTION STORMWATER POLLUTION PREVENTION (SWPP) NARRATIVE:

1. MARK CLEARING LIMITS: CLEARING LIMITS SHOULD BE MARKED WITH HIGH VISIBILITY FENCE, SILT FENCE OR EQUIVALENT.
2. ESTABLISH CONSTRUCTION ACCESS: SITE ACCESS WILL BE STABILIZED PER DETAIL 2/C5, ROCK SHALL BE ADDED AS NEEDED TO PREVENT TRACK-OUT ONTO SIDNEY AVENUE.
3. CONTROL FLOW RATES: RUNOFF RATES FROM THE SITE SHOULD BE CONTROLLED BY DISPERSING INTO NATIVE VEGETATION. CARE SHALL BE TAKEN TO NOT DIRECT SEDIMENT LADEN WATER TOWARD THE BIORETENTION CELLS AFTER EXCAVATION & TO PROTECT NATIVE SOILS.
4. INSTALL SEDIMENT CONTROLS: STRAW WATTLES & SILT FENCING SHOULD BE INSTALLED ALONG THE DOWNHILL PERIMETER OF SITE DISTURBANCE TO CONTROL SEDIMENTS.
5. STABILIZE SOILS: EARLY APPLICATION OF GRAVEL SHOULD BE APPLIED WHERE POSSIBLE. MULCH, PLASTIC COVERING OR CHIPPED VEGETATION SHOULD BE APPLIED WHERE POSSIBLE FOR SOIL STABILIZATION.
6. PROTECT SLOPES: NO STEEP SLOPES PROPOSED TO BE DISTURBED.
7. PROTECT DRAIN INLETS: DRAIN INLETS WILL BE FITTED WITH CONSTRUCTION SOCKS IF ALLOWED TO ACCEPT RUNOFF PRIOR TO FINAL SITE STABILIZATION.
8. STABILIZE CHANNELS & OUTLETS: ALL CHANNELS SHOULD BE EITHER GRASS OR ROCK LINED. OUTLETS SHOULD HAVE AN APPROPRIATE ROCK APRON.
9. CONTROL POLLUTANTS: ALL CONCRETE WASHOUT FROM CONCRETE TRUCKS AND/OR TOOLS SHOULD BE DIRECTED TO CONCRETE CONTAINMENT PER KC SDM BMP C151.
10. CONTROL DE-WATERING: NO DE-WATERING ANTICIPATED.
11. MAINTAIN BMP's: BMP's SHOULD BE MAINTAINED AND/OR REPAIRED AS REQUIRED FOR DURATION OF CONSTRUCTION. TEMPORARY BMP's WILL BE REMOVED WITHIN 30-DAYS OF FINAL SITE STABILIZATION.
12. MANAGE THE PROJECT: CONSTRUCTION SHOULD BE MANAGED TO MINIMIZE EROSION DUE TO RAINFALL AS MUCH AS POSSIBLE.
13. PROTECT LID BMP's: CARE SHALL BE TAKEN TO PREVENT COMPACTION OF THE BIORETENTION CELL AREA FROM SITE WORK & PROTECTIONS FOLLOWED. TURBID STORMWATER SHALL NOT BE DISCHARGED TO THE BIORETENTION CELL ONCE ROUGH GRADING OF CELL HAS TAKEN PLACE.

EROSION AND SEDIMENT CONTROL NOTES (ALSO REFER TO CHAPTER 9 SURFACE WATER DRAINAGE):

27. APPROVAL OF THESE TEMPORARY EROSION AND SEDIMENT CONTROL (TESC) PLANS 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.).
28. THE IMPLEMENTATION OF THESE TESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE TESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/CESCL UNTIL ALL CONSTRUCTION IS APPROVED.
29. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THESE PLANS SHALL BE CLEARLY FLAGGED BY A CONTINUOUS LENGTH OF SURVEY TAPE (OR FENCING, IF REQUIRED) PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE CLEARING LIMITS SHALL BE PERMITTED. THE CLEARING LIMITS SHALL BE MAINTAINED BY THE APPLICANT/CESCL FOR THE DURATION OF CONSTRUCTION.
30. STABILIZED CONSTRUCTION ENTRANCES, IN ACCORDANCE WITH STANDARD DETAILS SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES, SUCH AS CONSTRUCTED WHEEL WASH SYSTEMS OR WASH PADS, MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN AND TRACK-OUT TO STREET RIGHT-OF- WAY DOES NOT OCCUR FOR THE DURATION OF THE PROJECT.
31. THE TESC FACILITIES SHOWN ON THESE PLANS MUST BE CONSTRUCTED PRIOR TO ALL CLEARING AND GRADING TO ENSURE THAT THE TRANSPORT OF SEDIMENT TO SURFACE WATERS, DRAINAGE SYSTEMS, AND ADJACENT PROPERTIES IS REDUCED TO REQUIRED LEVELS.
32. THE TESC FACILITIES SHOWN ON THESE PLANS ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE TESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CHANGING SITE CONDITIONS (E.G., ADDITIONAL COVER MEASURES, ADDITIONAL SUMP PUMPS, RELOCATION OF DITCHES AND SILT FENCES, ADDITIONAL PERIMETER PROTECTION, ETC.), AS DIRECTED BY THE CITY ENGINEER.
33. THE TESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/CESCL AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING. WRITTEN RECORDS SHALL BE KEPT OF WEEKLY REVIEWS OF THE TESC FACILITIES AND OF SAMPLES TAKEN DURING THE WET SEASON (OCTOBER 1 TO APRIL AND OF MONTHLY REVIEWS DURING THE DRY SEASON (MAY 1 TO SEPTEMBER 30).
34. ANY AREAS OF EXPOSED SOILS, INCLUDING ROADWAY EMBANKMENTS, THAT WILL NOT BE DISTURBED FOR TWO DAYS DURING THE WET SEASON OR SEVEN DAYS DURING THE DRY SEASON SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED TESC METHODS (E.G., SEEDING, MULCHING, PLASTIC COVERING, ETC.).
35. ANY AREA NEEDING TESC MEASURES NOT REQUIRING IMMEDIATE ATTENTION SHALL BE ADDRESSED WITHIN SEVEN (7) DAYS.
36. THE TESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN TWENTY-FOUR (24) HOURS FOLLOWING A STORM EVENT.
37. AT NO TIME SHALL MORE THAN ONE (1) FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO FINAL INSPECTION. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO A DOWNSTREAM SYSTEM.
38. ANY PERMANENT FLOW CONTROL FACILITY USED AS A TEMPORARY SETTLING BASIN SHALL BE MODIFIED WITH THE NECESSARY EROSION CONTROL MEASURES AND SHALL PROVIDE ADEQUATE STORAGE CAPACITY. IF THE FACILITY IS TO FUNCTION ULTIMATELY AS AN INFILTRATION SYSTEM, THE TEMPORARY FACILITY MUST BE GRADED SO THAT THE BOTTOM AND SIDES ARE AT LEAST THREE (3) FEET ABOVE THE FINAL GRADE OF THE PERMANENT FACILITY.
39. WHERE STRAW MULCH FOR TEMPORARY EROSION CONTROL IS REQUIRED, IT SHALL BE APPLIED AT A MINIMUM THICKNESS OF 2 TO 3 INCHES.
40. PRIOR TO THE BEGINNING OF THE WET SEASON (OCTOBER 1), ALL DISTURBED AREAS SHALL BE REVIEWED TO IDENTIFY WHICH AREAS CAN BE SEEDED IN PREPARATION FOR THE WINTER RAINS. DISTURBED AREAS SHALL BE SEEDED WITHIN ONE WEEK OF THE BEGINNING OF THE WET SEASON. A SKETCH MAP OF THOSE AREAS TO BE SEEDED AND THOSE AREAS TO REMAIN UNCOVERED SHALL BE SUBMITTED TO THE CITY OF PORT ORCHARD CITY ENGINEER. THE INSPECTOR CAN REQUIRE SEEDING OF ADDITIONAL AREAS IN ORDER TO PROTECT SURFACE WATERS, ADJACENT PROPERTIES, OR DRAINAGE FACILITIES.

STRUCTURAL NOTES, (ALSO REFER TO CHAPTER 8 STRUCTURES):

41. THESE PLANS ARE APPROVED FOR CONSTRUCTION OF THE STANDARD ROAD AND DRAINAGE IMPROVEMENTS ONLY. PLANS FOR STRUCTURES SUCH AS BRIDGES, VAULTS, AND RETAINING WALLS REQUIRE A SEPARATE REVIEW, APPROVAL AND BUILDING PERMIT BY THE CITY OF PORT ORCHARD DEPARTMENT OF COMMUNITY DEVELOPMENT PRIOR TO CONSTRUCTION.
42. ROCKERIES ARE CONSIDERED TO BE A METHOD OF BANK STABILIZATION AND EROSION CONTROL. ROCKERIES SHALL NOT BE CONSTRUCTED IN FILL CONDITIONS TO SERVE AS RETAINING WALLS. ALL ROCKERIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE ROCK WALL CONSTRUCTION GUIDELINES PUBLISHED BY THE ASSOCIATED ROCKERY CONTRACTORS.
43. MECHANICALLY STABILIZED EARTH, OR REINFORCED SOIL, WALLS SHALL BE DESIGNED AND STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN WASHINGTON STATE.

RECOMMENDED CONSTRUCTION SEQUENCE:

44. CONDUCT A PRE-CONSTRUCTION MEETING WITH THE PUBLIC WORKS DEPARTMENT.
45. POST "NOTICE OF CONSTRUCTION ACTIVITY" SIGN WITH NAME AND PHONE NUMBER OF THE CESCL.
46. FLAG OR FENCE CLEARING LIMITS AND SIGNIFICANT TREES.
47. INSTALL CATCH BASIN PROTECTION, IF REQUIRED.
48. GRADE AND INSTALL CONSTRUCTION ENTRANCE(S).
49. INSTALL PERIMETER PROTECTION (SILT FENCE, BRUSH BARRIER, ETC.).
50. CONSTRUCT SEDIMENT PONDS AND TRAPS.
51. GRADE AND STABILIZE CONSTRUCTION ROADS.
52. CONSTRUCT SURFACE WATER CONTROLS (INTERCEPTOR DITCHES, PIPE SLOPE DRAINS, ETC.) SIMULTANEOUSLY WITH CLEARING AND GRADING FOR PROJECT DEVELOPMENT.
53. MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE CITY OF PORT ORCHARD STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
54. RELOCATE SURFACE WATER CONTROLS AND EROSION CONTROL MEASURES, OR INSTALL NEW MEASURES TO ENSURE THAT AS SITE CONDITIONS CHANGE THE EROSION AND SEDIMENT CONTROL IS ALWAYS IN ACCORDANCE WITH THE CITY OF PORT ORCHARD EROSION AND SEDIMENT CONTROL STANDARDS.
55. COVER ALL AREAS THAT WILL BE IDLE FOR MORE THAN SEVEN DAYS DURING THE DRY SEASON OR TWO DAYS DURING THE WET SEASON WITH STRAW, WOOD FIBER MULCH, COMPOST, PLASTIC SHEETING, OR EQUIVALENT.
56. STABILIZE ALL AREAS THAT REACH FINAL GRADE WITHIN SEVEN DAYS.
57. SEED OR SOD ANY AREAS TO REMAIN IDLE UNTIL SEED OR SOD IS ESTABLISHED.
58. UPON COMPLETION OF THE PROJECT, ALL DISTURBED AREAS MUST BE STABILIZED AND BEST MANAGEMENT PRACTICES REMOVED, IF APPROPRIATE.

T.E.S.C. PLAN, NOTES & SWPP NARRATIVE
WINDWARD ESTATES - 1912 SIDNEY AVENUE
PLAT UTILITY SUBMITTAL

12/9/2022
KELSEY E. LAUGHLIN STATE OF WASHINGTON 48830 REGISTERED PROFESSIONAL ENGINEER

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date: 12/9/2022
designed: k. laughlin
drawn:
checked: k. laughlin
job no.: MP10.12

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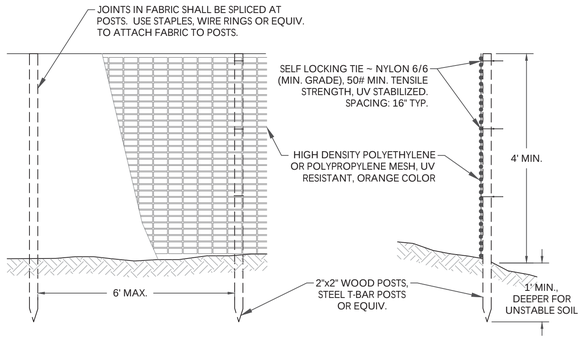
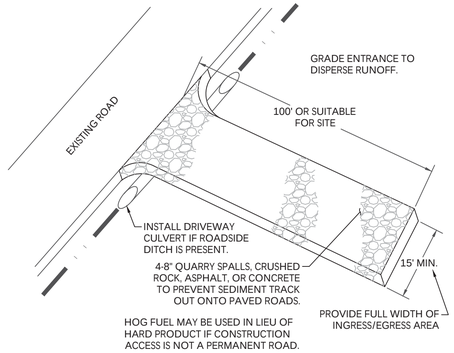
C4



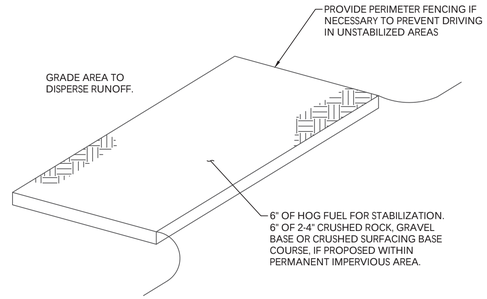
1 C5 HIGH VISIBILITY FENCE

NOT TO SCALE
PER WSDOT STD PLAN I-10.10.01



2 C5 STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE
PER KC SWDM BMP C105

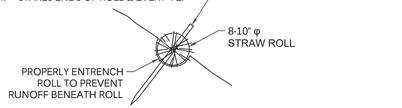


3 C5 STABILIZED PARKING

NOT TO SCALE
PER KC SWDM BMP C107

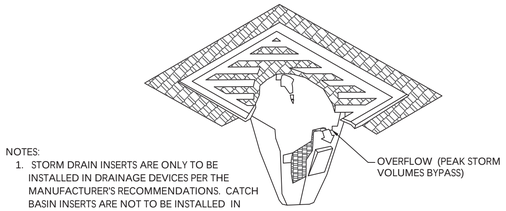
STRAW WATTLE NOTES:

1. INSTALL WATTLES ALONG CONTOURS, PERPENDICULAR TO FLOW.
2. ENTRENCH ROLLS 3-5" ON GRADUAL SLOPES AND 5-7" ON STEEPER SLOPES.
3. ADJACENT ROLLS SHALL TIGHTLY ABUT.
4. STAKES ENDS OF ROLL & EVERY 4'±.



4 C5 STRAW WATTLE

NOT TO SCALE
PER KC SWDM BMP C235

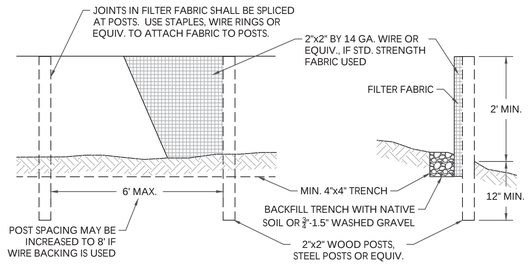


NOTES:

1. STORM DRAIN INSERTS ARE ONLY TO BE INSTALLED IN DRAINAGE DEVICES PER THE MANUFACTURER'S RECOMMENDATIONS. CATCH BASIN INSERTS ARE NOT TO BE INSTALLED IN CURB INLETS.
2. INSERTS SHALL BE INSPECTED & MAINTAINED WITH A ½ INCH OF RAIN ACCUMULATES WITHIN A 24-HOUR PERIOD. CLEAN &/OR REPLACE INSERT WHEN HALF OF TRAP IS FILLED WITH SEDIMENTS.

5 C5 CB CONSTRUCTION SOCK

NOT TO SCALE
PER KC SWPPP STD DETAILS



6 C5 SILT FENCE

NOT TO SCALE
PER KC SWDM BMP C233

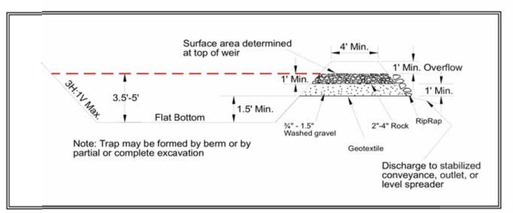


Figure 4.2.16 – Cross Section of Sediment Trap

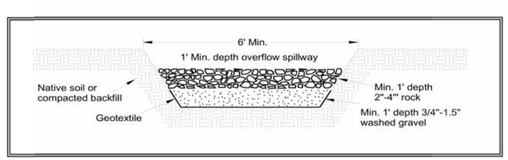


Figure 4.2.17 – Sediment Trap Outlet

7 C5 SEDIMENT TRAP

NOT TO SCALE
PER ECY SWMMWW BMP C240

NOTE: SEDIMENT TRAP PER ECY SWMMWW BMP C240, 1,050-sf TOP SURFACE AREA BASED ON 2-yr RUNOFF FLOW RATE.
1,650-sf TOP SURFACE AREA IF BASED ON 10-yr.

T.E.S.C. DETAILS
WINDWARD ESTATES - 1912 SIDNEY AVENUE
PLAT UTILITY SUBMITTAL

KELLEY E. LAUGHLIN — STATE OF WASHINGTON — 48830 — REGISTERED PROFESSIONAL ENGINEER — 12/9/2022

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C5
5 OF 22

Both sides of street, minimum width for FD access unobstructed is 20' .No parking markings POMC 20.200.016 (3) 503.3

One side of street, minimum width for FD access unobstructed is 20' .No parking markings POMC 20.200.016 (3) 503.3

Alley less than 20' may generate fire sprinkler requirements for homes.

One side of street, minimum width for FD access unobstructed is 20' .No parking markings POMC 20.200.016 (3) 503.3

Both sides of street, minimum width for FD access unobstructed is 20' .No parking markings POMC 20.200.016 (3) 503.3

STA 0+11.05 17.00R
BEGIN FRONTAGE IMPROVEMENTS; BIKE LANE, CURB & GUTTER

SIDNEY AVENUE EX. FOGLINE PROFILE

SIDNEY AVENUE ROW CENTERLINE

PAINTED CENTERLINE

LINE OF SIGHT LEFT (NORTH) SIGHT DISTANCE PROFILES ON SHEET C10

LINE OF SIGHT RIGHT (SOUTH)

LINE OF SIGHT LEFT (NORTH)

LINE OF SIGHT RIGHT (SOUTH)

EX. UTILITY POLE TO BE RELOCATED AS REQUIRED

LILLYBUG LOOP

ALLEY

SIDNEY AVENUE

BOTHWELL ST.

Bench Mark #5
Elev. 301.46
Rebar & Cap on Rebar
Marked 'Control 20795'
Datum: NAVD88

STA 21+78 = STA 15+56.71 ELEV=296.38

STA 17+12 = STA 1+04.60 ELEV=303.45

STA 20+00 = STA 11+17.72 ELEV=298.00

STA 10+00 = STA 2+80.27 ELEV=301.39

OPEN SPACE
29,080-SF

5,190 SF

5,228-SF

5,128-SF

5,717-SF

5,024-SF

5,003-SF

5,023-SF

3,000-SF

2,687-SF

2,559-SF

3,000-SF

3,266-SF

2,707-SF

3,365-SF

5,082-SF

5,873-SF

S20°46'12"W 347.56'

N87°34'01"W 443.25'

S87°34'02"E 431.05'

S84° 50' 32.00"E L=102.99

S77° 20' 32.00"E L=133.32

N84° 50' 32.00"W L=139.08

N77° 20' 32.00"W L=53.17

D=085.00 L=5192, R=35.00

D=007.50 L=32.72, R=250.00

D=095.10 L=58.03, R=35.00

N10° 09' 27.95"E L=108.41

N10° 09' 28.00"E L=178.46

N2° 39' 29"E 351.58'

GRADING PLAN

SITE PLAN BASED ON SURVEY BY AES CONSULTANTS, INC. DATED 3.28.2022.
DATUM: NAVD88
SCALE: 1" = 20'

0 10 20 40

GRADING PLAN
WINDWARD ESTATES - 1912 SIDNEY AVENUE
PLAT UTILITY SUBMITTAL

KELSEY E. LAUGHLIN — STATE OF WASHINGTON — 48830 — REGISTERED PROFESSIONAL ENGINEER
12/9/2022

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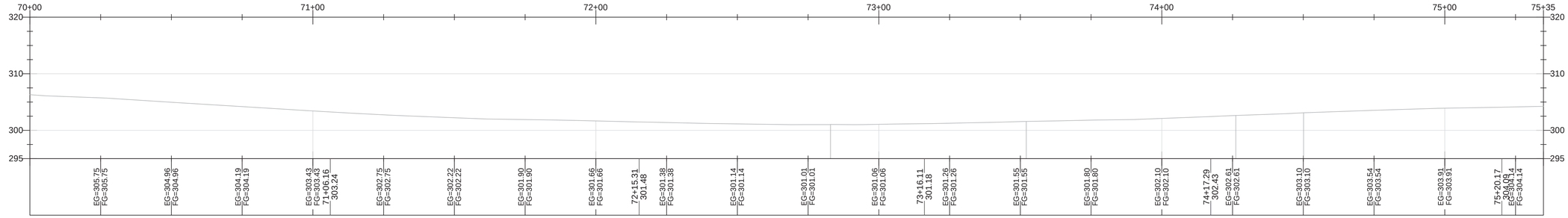
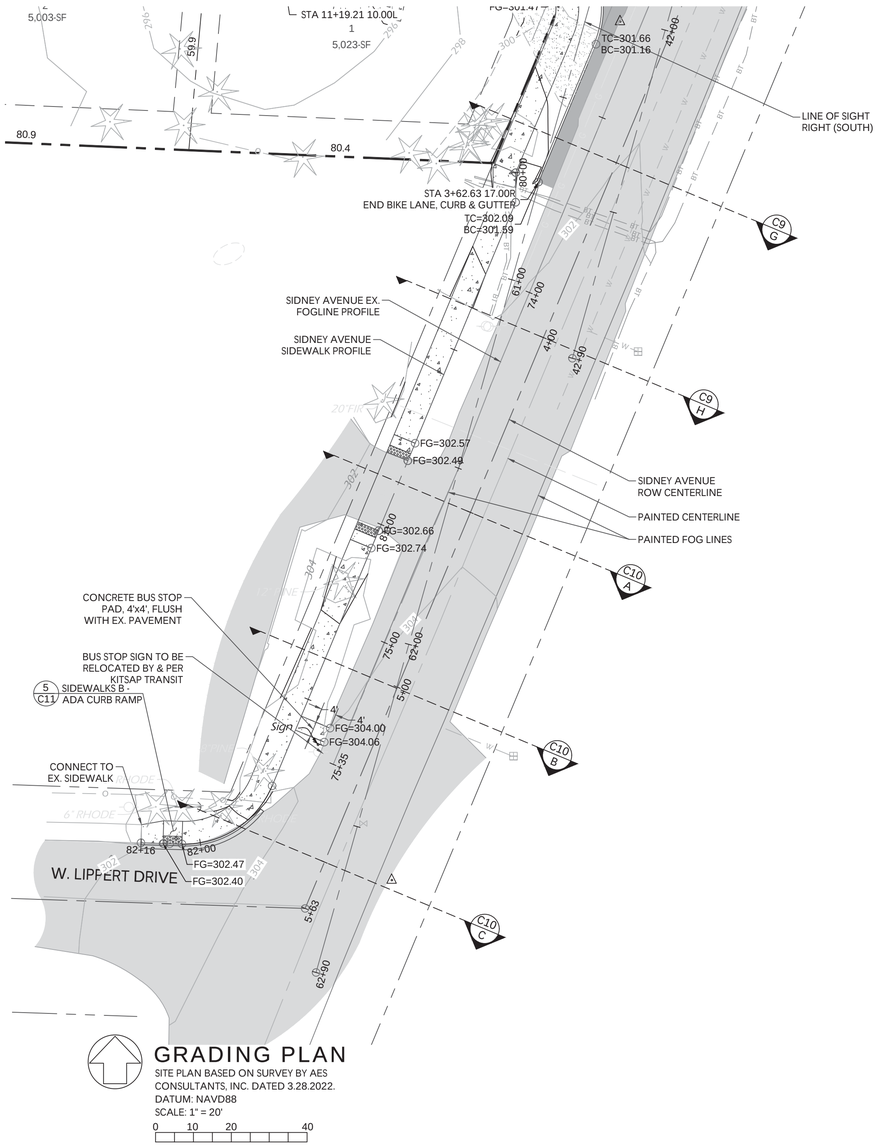
C6
6 OF 22



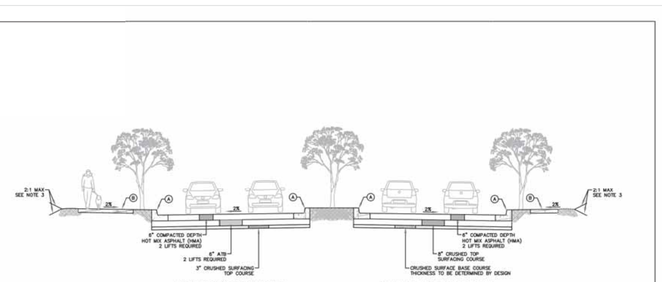
SIDNEY AVENUE EX. FOGLINE PROFILE STA 70+00 - 75+35

SCALE: 1" = 20' H
1" = 10' V
ELEVATIONS SHOWN AT ROAD CENTERLINE



GRADING PLAN

SITE PLAN BASED ON SURVEY BY AES CONSULTANTS, INC. DATED 3.28.2022.
DATUM: NAVD88
SCALE: 1" = 20'
0 10 20 40



STANDARD PAVEMENT SECTION

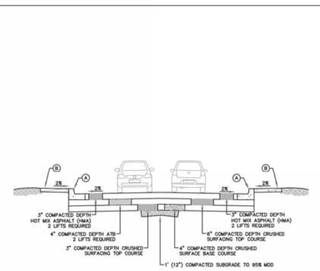
ALTERNATE PAVEMENT SECTION

Ⓐ CONCRETE CURB AND GUTTER, SEE STD DETAIL 500

Ⓑ CONCRETE SIDEWALK, SEE STD DETAIL 540

NOTES:
1. PAVEMENT SECTIONS SHALL BE PLACED ON 12" MINIMUM COMPACTED SUBGRADE (95% MOD).
2. PAVEMENT SECTION DEPTHS NOTED, REFER TO COMPACTED DEPTH.
3. SLOPE EASEMENTS MAY BE REQUIRED FOR GRADING OUTSIDE DEDICATED RIGHT-OF-WAY.
4. PLANTER STRIP SHALL DRAIN TOWARD STREET AT 0% TO 10% CROSS-SLOPE.
5. ADDITIONAL RIGHT-OF-WAY MAY BE REQUIRED FOR U-TURN LANE AT INTERSECTIONS.

Est. 1893 Port ORCHARD	TYPICAL STREET SECTION B MINOR ARTERIAL
DRAWN BY	IDS
DATE	1/29/2019
SCALE	NTS
DRAWING NUMBER	401



STANDARD PAVEMENT SECTION

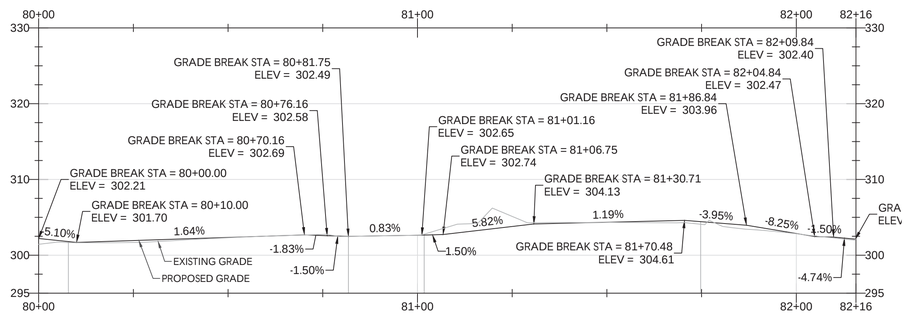
ALTERNATE PAVEMENT SECTION

Ⓐ CONCRETE CURB AND GUTTER, SEE STD DETAIL 500

Ⓑ CONCRETE SIDEWALK, SEE STD DETAIL 540

NOTES:
1. PAVEMENT SECTIONS SHALL BE PLACED OF 12" MINIMUM COMPACTED SUBGRADE (95% MOD).
2. PAVEMENT SECTION DEPTHS NOTED REFER TO COMPACTED DEPTH.
3. SLOPE EASEMENTS MAY BE REQUIRED FOR GRADING OUTSIDE DEDICATED RIGHT-OF-WAY.
4. PLANTER STRIP SHALL DRAIN TOWARD STREET AT 0% TO 10% CROSS-SLOPE.

Est. 1893 Port ORCHARD	TYPICAL STREET SECTION D LOCAL
DRAWN BY	IDS
DATE	1/29/2019
SCALE	NTS
DRAWING NUMBER	403



SIDNEY AVENUE SIDEWALK PROFILE STA 80+00 - 85+35

SCALE: 1" = 20' H
1" = 10' V
ELEVATIONS SHOWN AT ROAD CENTERLINE

GRADING PLAN - SIDNEY SIDEWALK
WINDWARD ESTATES - 1912 SIDNEY AVENUE
PLAT UTILITY SUBMITTAL

KELSEY E. LAUGHLIN — STATE OF WASHINGTON — 18839 REGISTERED PROFESSIONAL ENGINEER — 12/9/2022

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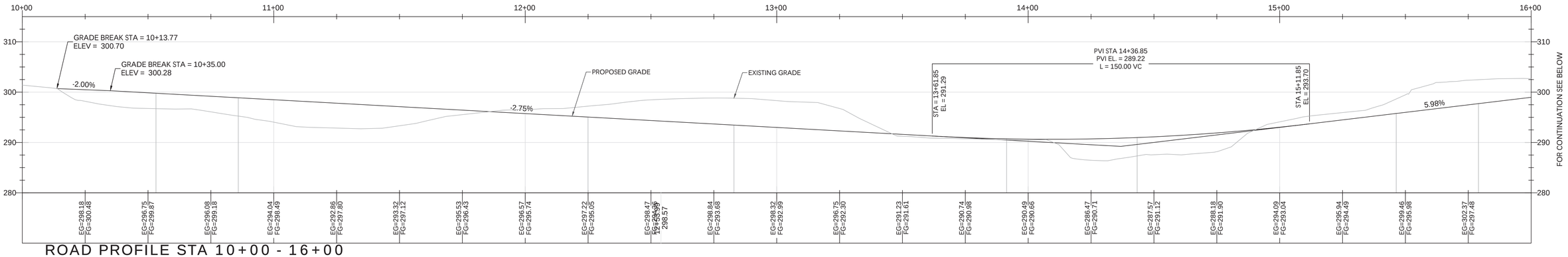
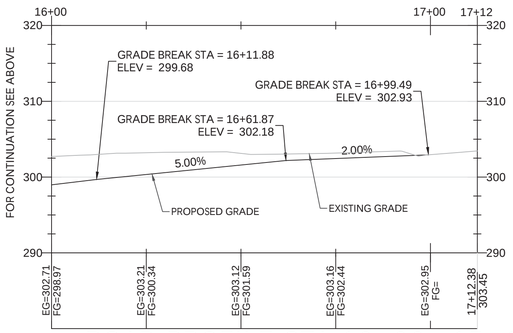
7 OF 22



ROAD PROFILE STA 10+00 - 16+00

SCALE: 1" = 20' H
1" = 10' V
ELEVATIONS SHOWN AT ROAD CENTERLINE



ROAD PROFILE STA 16+00 - 17+12

SCALE: 1" = 20' H
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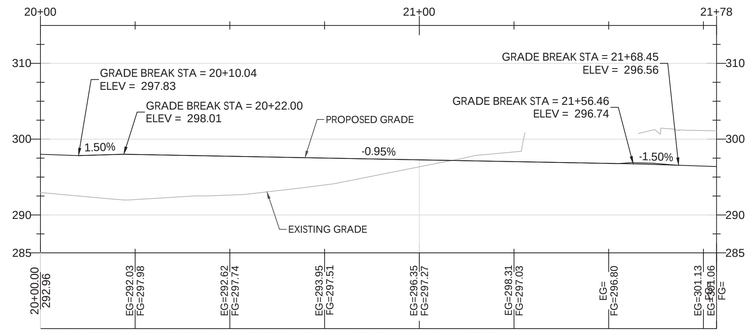
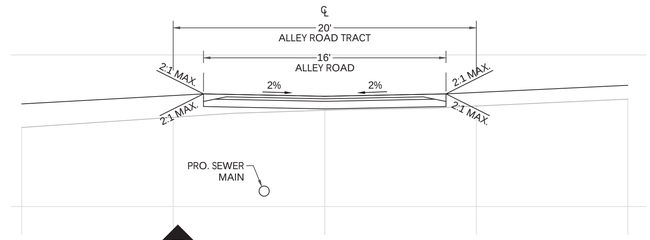
ELEVATIONS SHOWN AT ROAD CENTERLINE



ALLEY PROFILE STA 20+00 - 21+78

SCALE: 1" = 20' H
1" = 10' V
ELEVATIONS SHOWN AT ROAD CENTERLINE

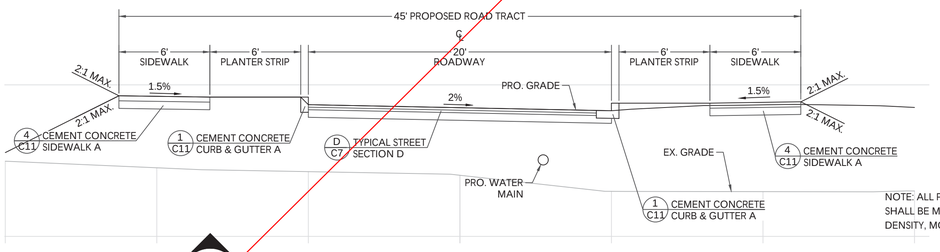


A C8 **Alley Section 20+22 - 21+56**

SCALE: 1" = 5'
ROAD IMPROVEMENTS TYPICAL BUT EXISTING GRADE & UTILITIES VARY.

Alley is less than 20' wide and is not an approved FD access road. This may generate fire sprinkler requirements for homes.

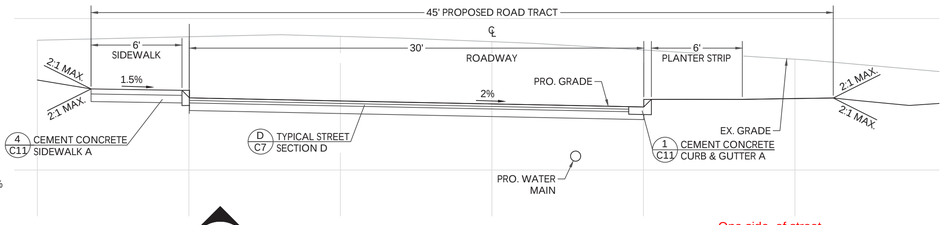
Both sides of street, minimum width for FD access unobstructed is 20' .No parking markings POMC 20.200.016 (3) 503.3



NOTE: ALL PAVEMENT DEPTHS SHOWN SHALL BE MIN. COMPACTED DEPTH TO 95% DENSITY, MODIFIED PROCTOR.

B C8 **Road Section 10+28 - 10+76**

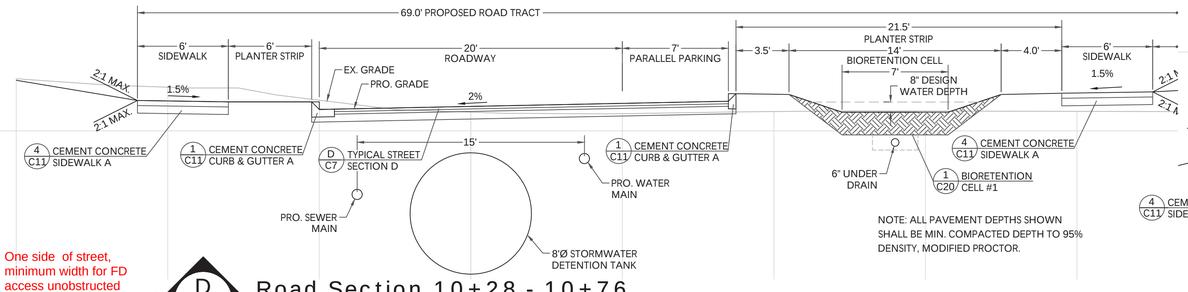
SCALE: 1" = 5'
ROAD IMPROVEMENTS TYPICAL BUT EXISTING GRADE & UTILITIES VARY.



C C8 **Road Section 10+28 - 10+76**

SCALE: 1" = 5'
ROAD IMPROVEMENTS TYPICAL BUT EXISTING GRADE & UTILITIES VARY.

One side of street, minimum width for FD access unobstructed is 20' .No parking markings POMC 20.200.016 (3) 503.3

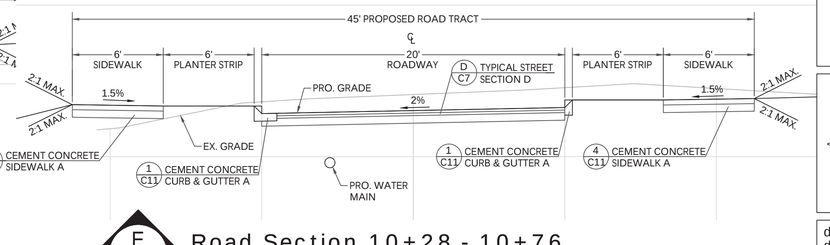


NOTE: ALL PAVEMENT DEPTHS SHOWN SHALL BE MIN. COMPACTED DEPTH TO 95% DENSITY, MODIFIED PROCTOR.

One side of street, minimum width for FD access unobstructed is 20' .No parking markings POMC 20.200.016 (3) 503.3

D C8 **Road Section 10+28 - 10+76**

SCALE: 1" = 5'
ROAD IMPROVEMENTS TYPICAL BUT EXISTING GRADE & UTILITIES VARY.



Both sides of street, minimum width for FD access unobstructed is 20' .No parking markings POMC 20.200.016 (3) 503.3

E C8 **Road Section 10+28 - 10+76**

SCALE: 1" = 5'
ROAD IMPROVEMENTS TYPICAL BUT EXISTING GRADE & UTILITIES VARY.

ROAD PROFILES & SECTIONS
WINDWARD ESTATES - 1912 SIDNEY AVENUE
PLAT UTILITY SUBMITTAL

KELSEY E. LAUGHLIN — STATE OF WASHINGTON — 48830 — REGISTERED PROFESSIONAL ENGINEER — 12/9/2022

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date: 12/9/2022
designed: k. laughlin
drawn:
checked: k. laughlin
job no.: MP10.12

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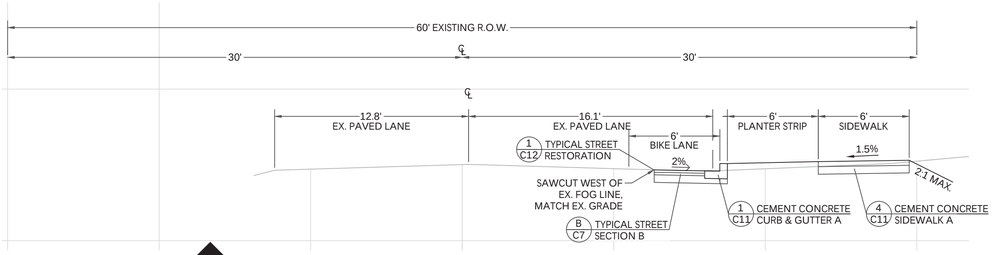
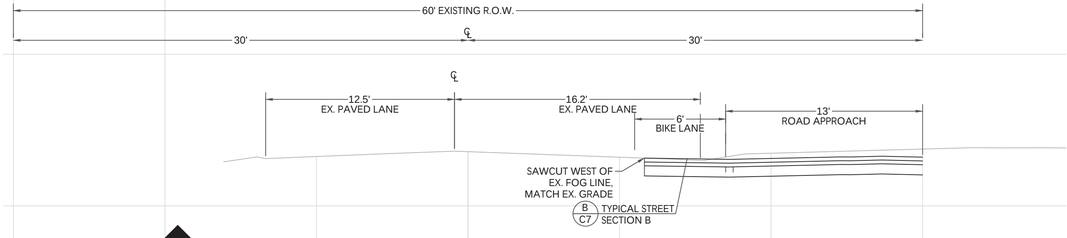


A C9

Sidney Avenue Section 0+50

SCALE: 1" = 5'

ROAD IMPROVEMENTS TYPICAL BUT EXISTING GRADE & UTILITIES VARY.

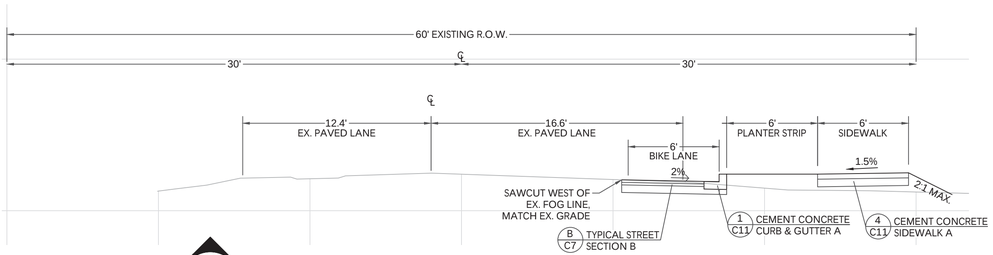


B C9

Sidney Avenue Section 1+00

SCALE: 1" = 5'

ROAD IMPROVEMENTS TYPICAL BUT EXISTING GRADE & UTILITIES VARY.

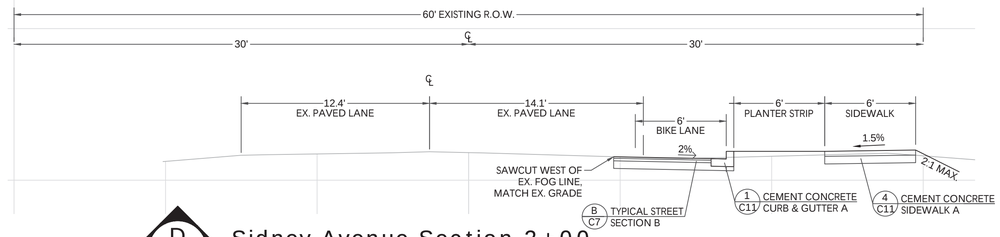


C C9

Sidney Avenue Section 1+50

SCALE: 1" = 5'

ROAD IMPROVEMENTS TYPICAL BUT EXISTING GRADE & UTILITIES VARY.



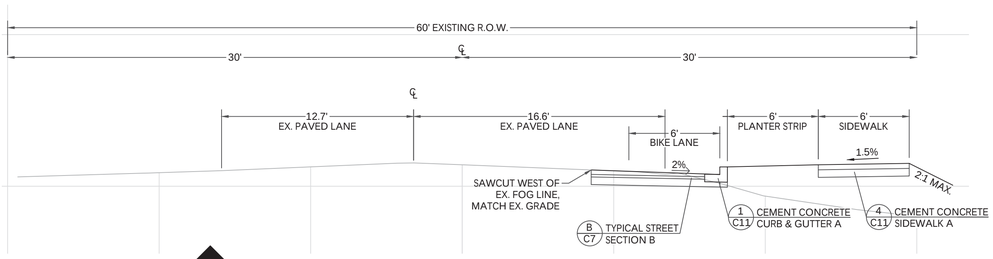
D C9

Sidney Avenue Section 2+00

SCALE: 1" = 5'

ROAD IMPROVEMENTS TYPICAL BUT EXISTING GRADE & UTILITIES VARY.

NOTE: ALL PAVEMENT DEPTHS SHOWN SHALL BE MIN. COMPACTED DEPTH TO 95% DENSITY, MODIFIED PROCTOR.

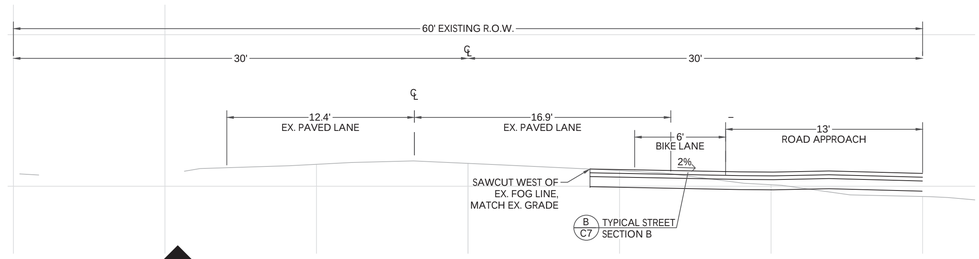


E C9

Sidney Avenue Section 2+50

SCALE: 1" = 5'

ROAD IMPROVEMENTS TYPICAL BUT EXISTING GRADE & UTILITIES VARY.

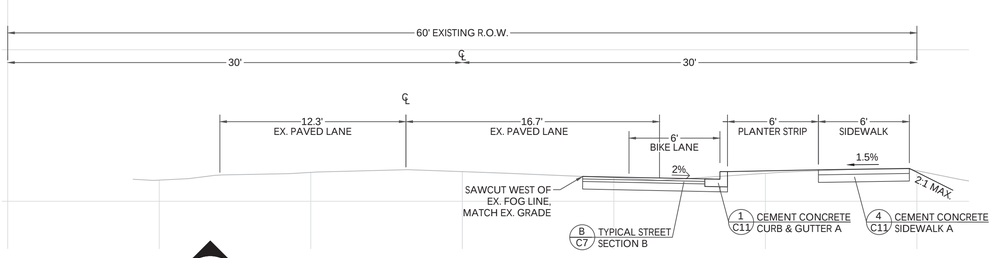


F C9

Sidney Avenue Section 3+00

SCALE: 1" = 5'

ROAD IMPROVEMENTS TYPICAL BUT EXISTING GRADE & UTILITIES VARY.

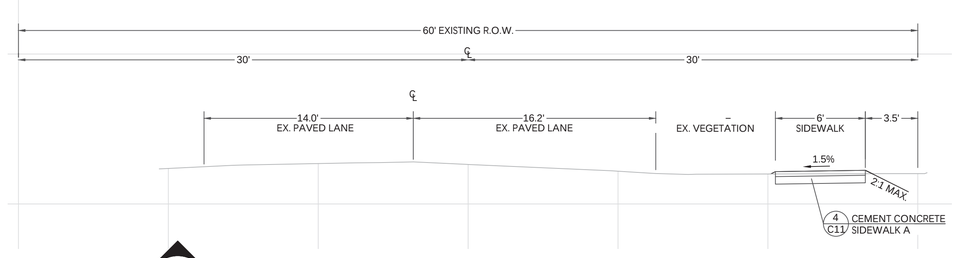


G C9

Sidney Avenue Section 3+50

SCALE: 1" = 5'

ROAD IMPROVEMENTS TYPICAL BUT EXISTING GRADE & UTILITIES VARY.



H C9

Sidney Avenue Section 4+00

SCALE: 1" = 5'

ROAD IMPROVEMENTS TYPICAL BUT EXISTING GRADE & UTILITIES VARY.

SIDNEY FRONTAGE SECTIONS
WINDWARD ESTATES - 1912 SIDNEY AVENUE
PLAT UTILITY SUBMITTAL

KELSEY E. LAUGHLIN — STATE OF WASHINGTON — 48830 — REGISTERED PROFESSIONAL ENGINEER — 12/9/2022

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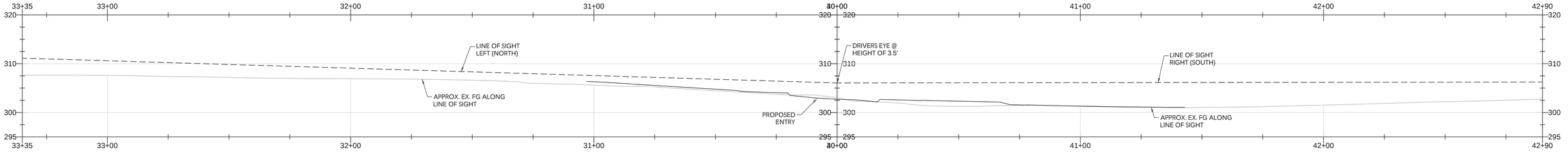
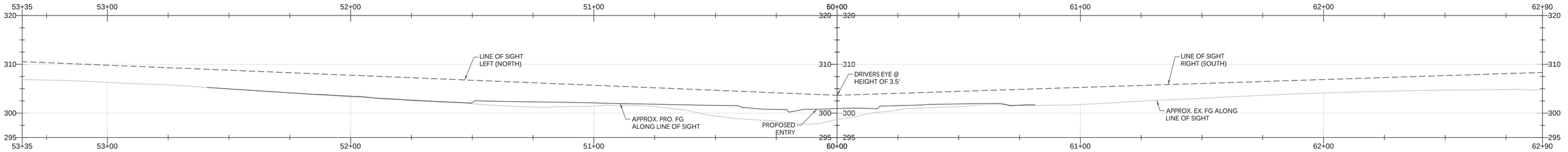


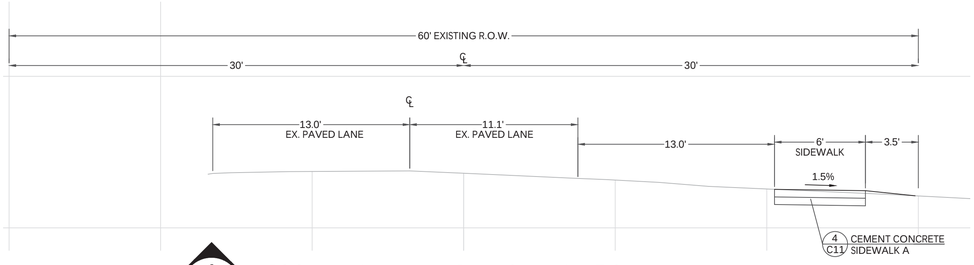
SIGHT DISTANCE PROFILE - NORTH ENTRY

SCALE: 1" = 20' H
1" = 10' V
POSTED SPEED LIMIT: 30 MPH
ELEVATIONS SHOWN ALONG LINE OF SIGHT



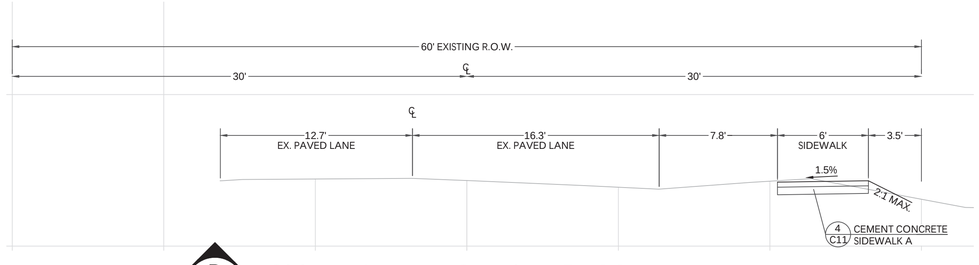
SIGHT DISTANCE PROFILE - SOUTH ENTRY

SCALE: 1" = 20' H
1" = 10' V
POSTED SPEED LIMIT: 30 MPH
ELEVATIONS SHOWN ALONG LINE OF SIGHT



A C10 **Sidney Avenue Section 4+50**

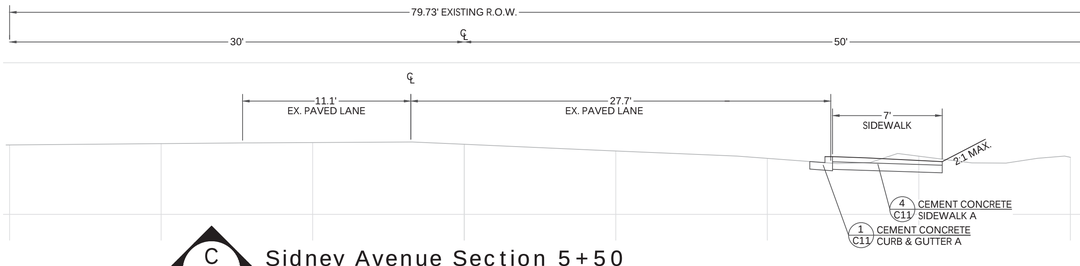
SCALE: 1" = 5'
ROAD IMPROVEMENTS TYPICAL BUT EXISTING GRADE & UTILITIES VARY.



B C10 **Sidney Avenue Section 5+00**

SCALE: 1" = 5'
ROAD IMPROVEMENTS TYPICAL BUT EXISTING GRADE & UTILITIES VARY.

NOTE: ALL PAVEMENT DEPTHS SHOWN SHALL BE MIN. COMPACTED DEPTH TO 95% DENSITY, MODIFIED PROCTOR.



C C10 **Sidney Avenue Section 5+50**

SCALE: 1" = 5'
ROAD IMPROVEMENTS TYPICAL BUT EXISTING GRADE & UTILITIES VARY.

SIGHT DISTANCE PROFILES & SIDNEY SECTIONS
WINDWARD ESTATES - 1912 SIDNEY AVENUE
PLAT UTILITY SUBMITTAL

KELSEY E. LAUGHLIN — STATE OF WASHINGTON — 18830 — REGISTERED PROFESSIONAL ENGINEER
12/9/2022

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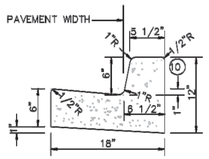
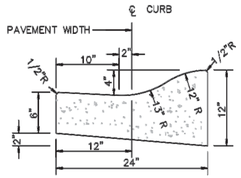
C10
10 OF 22

NOTES:

1. CONSTRUCTION OF CURB DETAILS SHALL BE IN ACCORDANCE WITH THE CURRENTLY ADOPTED STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION AS PUBLISHED BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND THE AMERICAN PUBLIC WORKS ASSOCIATION. (WSDOT/APWA SPECIFICATIONS) UNLESS OTHERWISE MODIFIED BELOW.
2. ALL CONCRETE SHALL BE COMMERCIAL CLASS PER WSDOT/APWA SPECIFICATIONS.
3. FORMS SHALL BE TRUE TO LINE AND GRADE AND SECURELY STAKED. STEEL FORMS ONLY SHALL BE USED ON TANGENT SECTIONS. WOOD FORMS MAY BE USED ON CURVED SECTIONS.
4. FULL DEPTH EXPANSION JOINTS CONSISTING OF 3/8 INCH MINIMUM PREMOLDED JOINT MATERIAL SHALL BE PLACED ADJACENT TO CATCH BASINS, INLETS AND AT POINTS OF TANGENCY ON STREETS AND DRIVEWAY RETURNS. MAXIMUM SPACING SHALL BE 20 FEET.
5. CONTRACTION JOINTS (DUMMY JOINTS) CONSISTING OF 3/8" MIN. X 2" OF PREMOLDED JOINT MATERIAL SHALL BE CONSTRUCTED AT INTERVALS OF 10 FEET.
6. ALL JOINTS SHALL BE CLEAN AND EDGED.
7. FINISH SHALL BE A LIGHT BROOM FINISH.
8. FINISHED CURBS AND GUTTERS SHALL BE SPRAYED WITH A CLEAR CURING COMPOUND.
9. SUBGRADE COMPACTION FOR CURBS AND GUTTERS SHALL MEET A MINIMUM 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH SEC. 2-03.3(14) OF THE WSDOT/APWA SPECIFICATIONS.



CEMENT CONCRETE
VERTICAL CURB AND GUTTER

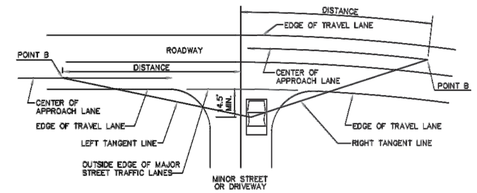


CEMENT CONCRETE
ROLLED CURB AND GUTTER

Est. 1890 Port ORCHARD

CURB AND GUTTER A		
CEMENT CONCRETE CURB AND GUTTER	DRAWN BY	IDB
	DATE	1/29/2019
	SCALE	NTS
	DRAWING NUMBER	300

1 C11 CEMENT CONCRETE CURB & GUTTER
NOT TO SCALE



NOTES

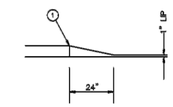
1. PARKING STRIPS OR LANES DESIGNATED FOR PARKING ONLY ARE OUTSIDE THIS REFERENCE LINE AND ARE NOT INCLUDED IN THE MAJOR STREET TRAFFIC LANES.
2. ALL STREET ENDS SHALL BE SIGNED PER THE MUTCD.
3. VALUES FOR SIGHT DISTANCE ARE BASED ON DRIVER'S EYE HEIGHT OF 3.5 FEET SET BACK 14.5 FEET FROM THE EDGE OF TRAVELED WAY WITH AN OBJECT 4.25 FEET IN HEIGHT.

DESIGN SPEED (MPH)	20	25	30	35	40	45	50	55	60	65
LEFT TURN (FEET)	225	280	335	390	445	500	555	610	665	720
CROSSING/RIGHT TURN (FEET)	185	240	290	335	385	430	480	530	575	625

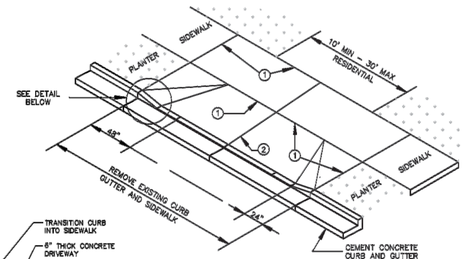
Est. 1890 Port ORCHARD

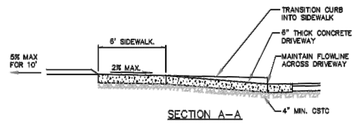
DRIVEWAYS A		
ENTERING SIGHT DISTANCE	DRAWN BY	IDB
	DATE	1/29/2019
	SCALE	NTS
	DRAWING NUMBER	320

2 C11 DRIVEWAYS - ENTERING SIGHT DISTANCE
NOT TO SCALE



DROP CURB TRANSITION DETAIL





SECTION A-A

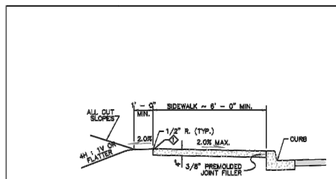
NOTES:

1. FULL DEPTH EXPANSION JOINT, 3/8" MINIMUM THICKNESS.
2. FULL DEPTH EXPANSION JOINT, 3/8" MINIMUM THICKNESS IF WIDTH OF DRIVEWAY IS 15 FEET OR GREATER.
3. DRIVEWAY SECTION WITHIN PUBLIC RIGHT-OF-WAY IS TO BE SURFACED WITH ASPHALT OR CONCRETE.
4. DRIVEWAY CEMENT CONCRETE DEPTH SHALL BE A MINIMUM OF 6" AND PLACED ON COMPACTED GRADE.
5. CONCRETE SHALL BE COMMERCIAL CLASS CONCRETE PER WSDOT/APWA SPECIFICATIONS.
6. CLEAN AND EDGE ALL JOINTS.

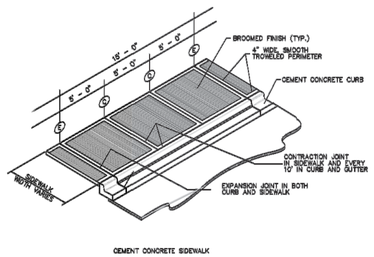
Est. 1890 Port ORCHARD

DRIVEWAYS B		
RESIDENTIAL DRIVEWAY	DRAWN BY	IDB
	DATE	1/31/2019
	SCALE	NTS
	DRAWING NUMBER	321

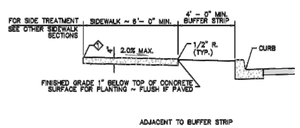
3 C11 RESIDENTIAL DRIVEWAY
NOT TO SCALE



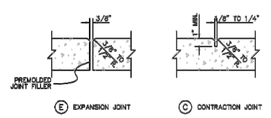
ADJACENT TO CURB



CEMENT CONCRETE SIDEWALK



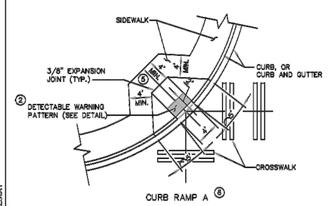
ADJACENT TO BUFFER STRIP



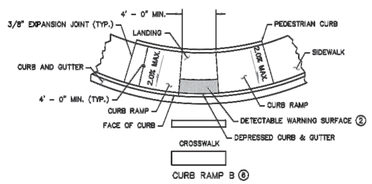
Est. 1890 Port ORCHARD

SIDEWALK A		
CEMENT CONCRETE SIDEWALK	DRAWN BY	IDB
	DATE	1/31/2019
	SCALE	NTS
	DRAWING NUMBER	340

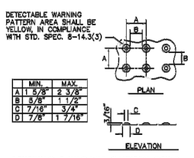
4 C11 CEMENT CONCRETE SIDEWALK A
NOT TO SCALE



CURB RAMP A ⑥



CURB RAMP B ⑥



	MIN.	MAX.
A	5'8"	6 3/8"
B	5'8"	1 1/8"
C	7 7/16"	3/4"
D	7/8"	1 7/16"

DETECTABLE WARNING PATTERN DETAIL

NOTES

1. PLACEMENT OF GRATINGS, ACCESS COVERS AND OTHER APPURTENANCES SHALL NOT BE LOCATED ON CURB RAMPS, LANDINGS AND GUTTERS WITHIN THE PEDESTRIAN ACCESS ROUTE.
2. RAMPS SHALL BE TEXTURED USING TRUNCATED DOME PATTERN (SEE DETAIL THIS PAGE). DETECTABLE WARNING PATTERN SHALL BE YELLOW IN COMPLIANCE WITH WSDOT STANDARD SPECIFICATION 8-14.3(3)
3. RAMP CENTER LINE SHALL BE PERPENDICULAR TO OR RADIAL TO CURB RETURNS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
4. RAMPS SHALL BE CONSTRUCTED AT CORRESPONDING SIDEWALK LOCATIONS ON OPPOSITE SIDE OF STREETS WHEN RAMPS ARE CONSTRUCTED ON ONE SIDE OF STREET.

⑤ LANDING SHALL BE MINIMUM 4 X 4'.
⑥ CURB RAMP A MUST BE INSTALLED UNLESS OTHERWISE APPROVED.

Est. 1890 Port ORCHARD

SIDEWALKS B		
ADA CURB RAMP	DRAWN BY	IDB
	DATE	1/29/2019
	SCALE	NTS
	DRAWING NUMBER	341

5 C11 SIDEWALKS - ADA CURB RAMP
NOT TO SCALE

GRADING DETAILS
WINDWARD ESTATES - 1912 SIDNEY AVENUE
PLAT UTILITY SUBMITTAL

12/9/2022

KELSEY E. LAUGHLIN — STATE OF WASHINGTON — 48930 — REGISTERED PROFESSIONAL ENGINEER

SEABOLD ENGINEERING LLC
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DATE:	12/9/2022
DESIGNED:	K. LAUGHLIN
DRAWN:	
CHECKED:	K. LAUGHLIN
JOB NO.:	MP10.12

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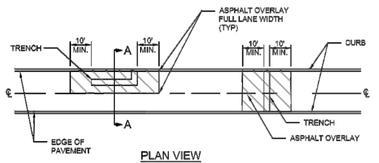
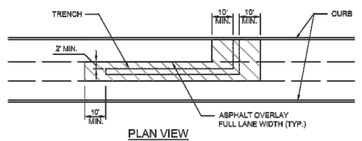
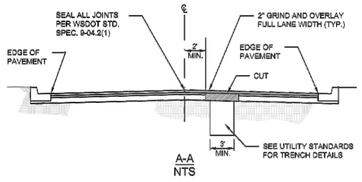
mpbergs@comcast.net

C11
11 OF 22







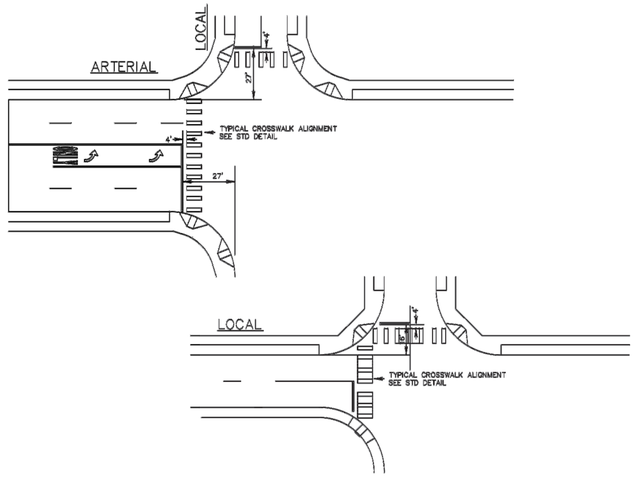
NOTES:

1. THIS STANDARD APPLIES TO ALL CUTS IN ASPHALT ROADWAY.
2. GRIND/OVERLAY WITHIN SIGNAL LOOP DETECTION ZONE MAY BE EXTENDED TO INCLUDE ADDITIONAL LANES AND/OR DETECTORS
3. OVERLAY AREA MAY BE EXTENDED AT THE DISCRETION OF THE TRANSPORTATION ENGINEER TO ENCOMPASS ADJACENT STREET CUTS OR PREVIOUS RESTORATIONS.
4. ADJUST ALL UTILITY CASTINGS TO FINISHED GRADE AFTER OVERLAY AND RESTORE CHANNELIZATION AND LOOP DETECTION

Port ORCHARD Est. 1890	TYPICAL STREET RESTORATION ASPHALT OVERLAY FOR ROADWAY TRENCH RESTORATION	DRAWN BY: IDB DATE: 1/24/2019 SCALE: NTS DRAWING NUMBER: 404

U:\ENGINEERING\DEVELOPMENT CLIENTS\2018 UPDATE_STANDARD DETAILS\NEW STANDARDS\CAD FILES\404

1 C12 TYPICAL STREET RESTORATION
NOT TO SCALE



Port ORCHARD Est. 1890	MARKINGS J TYPICAL CROSSWALK ALIGNMENT - ARTERIAL/LOCAL	DRAWN BY: IDB DATE: 1/31/2019 SCALE: NTS DRAWING NUMBER: 469

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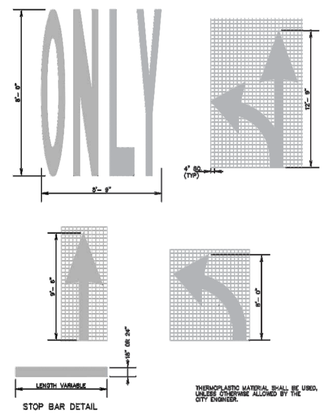
2 C12 MARKINGS J
NOT TO SCALE



Port ORCHARD Est. 1890	MARKINGS K TYPICAL ARROWS, STOP BAR, AND ONLY	DRAWN BY: IDB DATE: 1/30/2019 SCALE: NTS DRAWING NUMBER: 430

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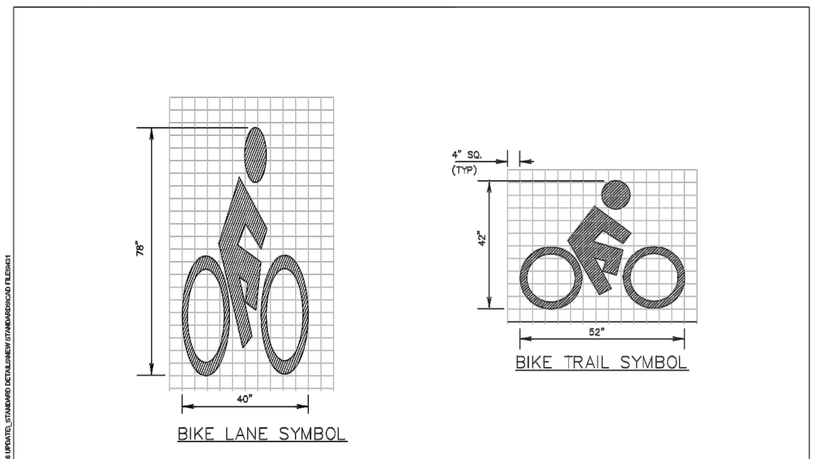
3 C12 MARKINGS K
NOT TO SCALE



Port ORCHARD Est. 1890	MARKINGS L BIKE LANE SYMBOLS	DRAWN BY: IDB DATE: 1/30/2019 SCALE: NTS DRAWING NUMBER: 431

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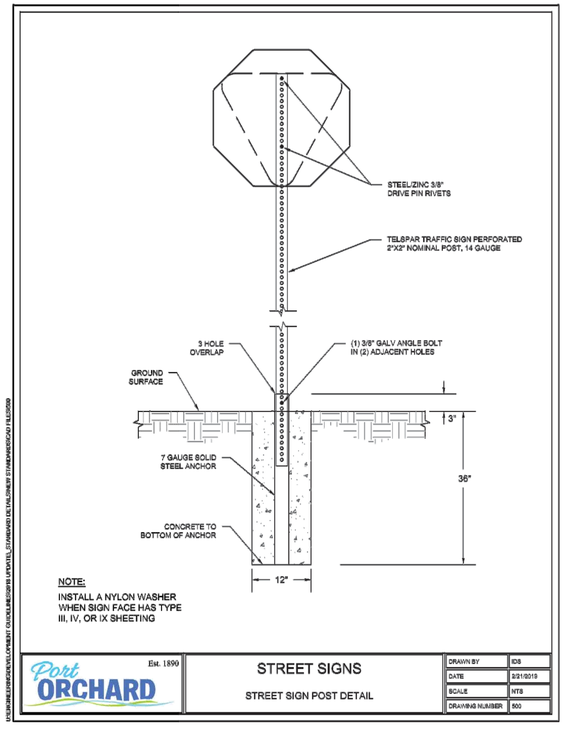
4 C12 BIKE LANE MARKING
NOT TO SCALE



NOTE:
INSTALL A NYLON WASHER WHEN SIGN FACE HAS TYPE III, IV, OR IX SHEETING

Port ORCHARD Est. 1890	STREET SIGNS STREET SIGN POST DETAIL	DRAWN BY: IDB DATE: 3/21/2019 SCALE: NTS DRAWING NUMBER: 500

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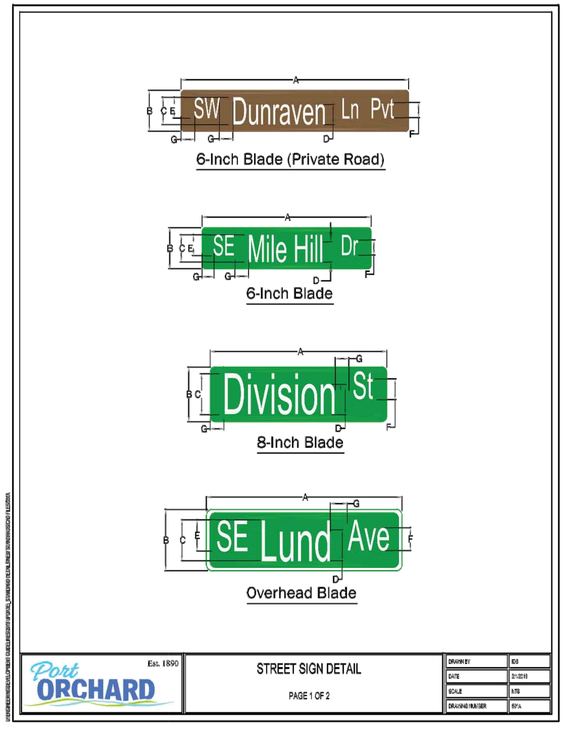
5 C12 STREET SIGNS
NOT TO SCALE



Port ORCHARD Est. 1890	STREET SIGN DETAIL PAGE 1 OF 2	DRAWN BY: IDB DATE: 3/1/2019 SCALE: NTS DRAWING NUMBER: 501a

U:\ENGINEERING\DEVELOPMENT CLIENTS\2018 UPDATE_STANDARD DETAILS\NEW STANDARDS\CAD FILES\501a

6 C12 STREET SIGN DETAIL
NOT TO SCALE

Include signage and or curb marking details on C12 for Lillybug Loop

POMC20.200.016 (11)D103.6. Signs. Where required by the fire code official, fire apparatus access roads shall be marked with permanent NO PARKING—FIRE LANE signs complying with Figure D103.6. Signs shall have a minimum dimension of 12 inches (305 mm) wide by 18 inches (457 mm) high and have red letters on a white reflective background. Signs shall be posted on one or both sides of the fire apparatus road as required by Section D103.6.1 or D103.6.2.

GRADING DETAILS
WINDWARD ESTATES - 1912 SIDNEY AVENUE
PLAT UTILITY SUBMITTAL

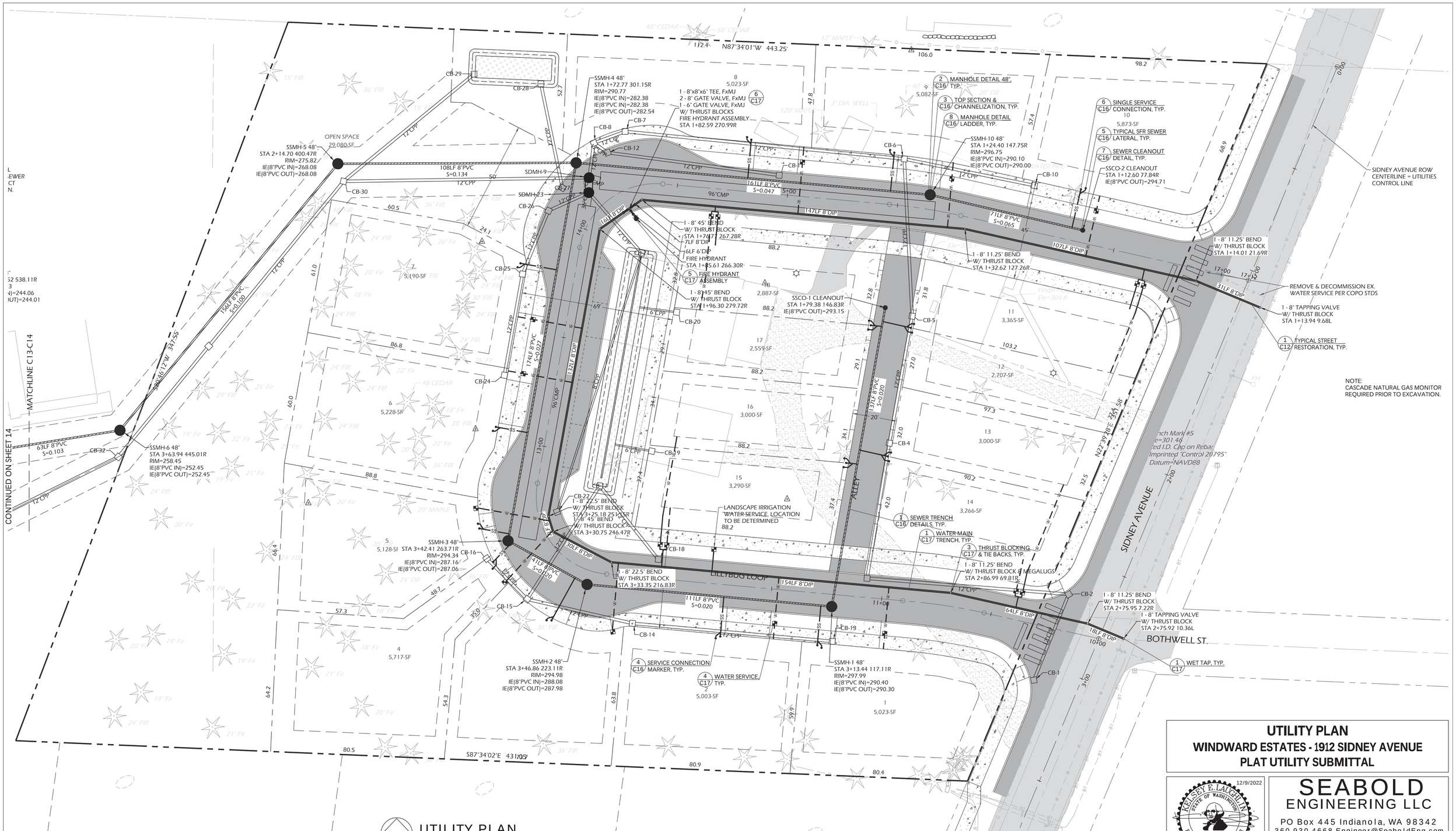
KELSEY E. LAUGHLIN — STATE OF WASHINGTON — 18838 REGISTERED PROFESSIONAL ENGINEER — 12/9/2022

SEABOLD ENGINEERING LLC
PO Box 445 Indianola, WA 98342
360.930.4668 Engineer@SeaboldEng.com

DATE: 12/9/2022
DESIGNED: K. LAUGHLIN
DRAWN:
CHECKED: K. LAUGHLIN
JOB NO.: MP10.12

PAUL & MARCIA BERG
10813 32ND STREET CT NW
GIG HARBOR, WA 98335
253.307.0486
mpbergs@comcast.net

C12
12 OF 22



UTILITY PLAN

SITE PLAN BASED ON SURVEY BY AES CONSULTANTS, INC. DATED 3.28.2022.
DATUM: NAVD88
SCALE: 1" = 20'

0 10 20 40

UTILITY PLAN
WINDWARD ESTATES - 1912 SIDNEY AVENUE
PLAT UTILITY SUBMITTAL

KELSEY E. LAUGHLIN
STATE OF WASHINGTON
48830
REGISTERED
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12/9/2022

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designed: k. laughlin
drawn:
checked: k. laughlin
job no.: MP10.12

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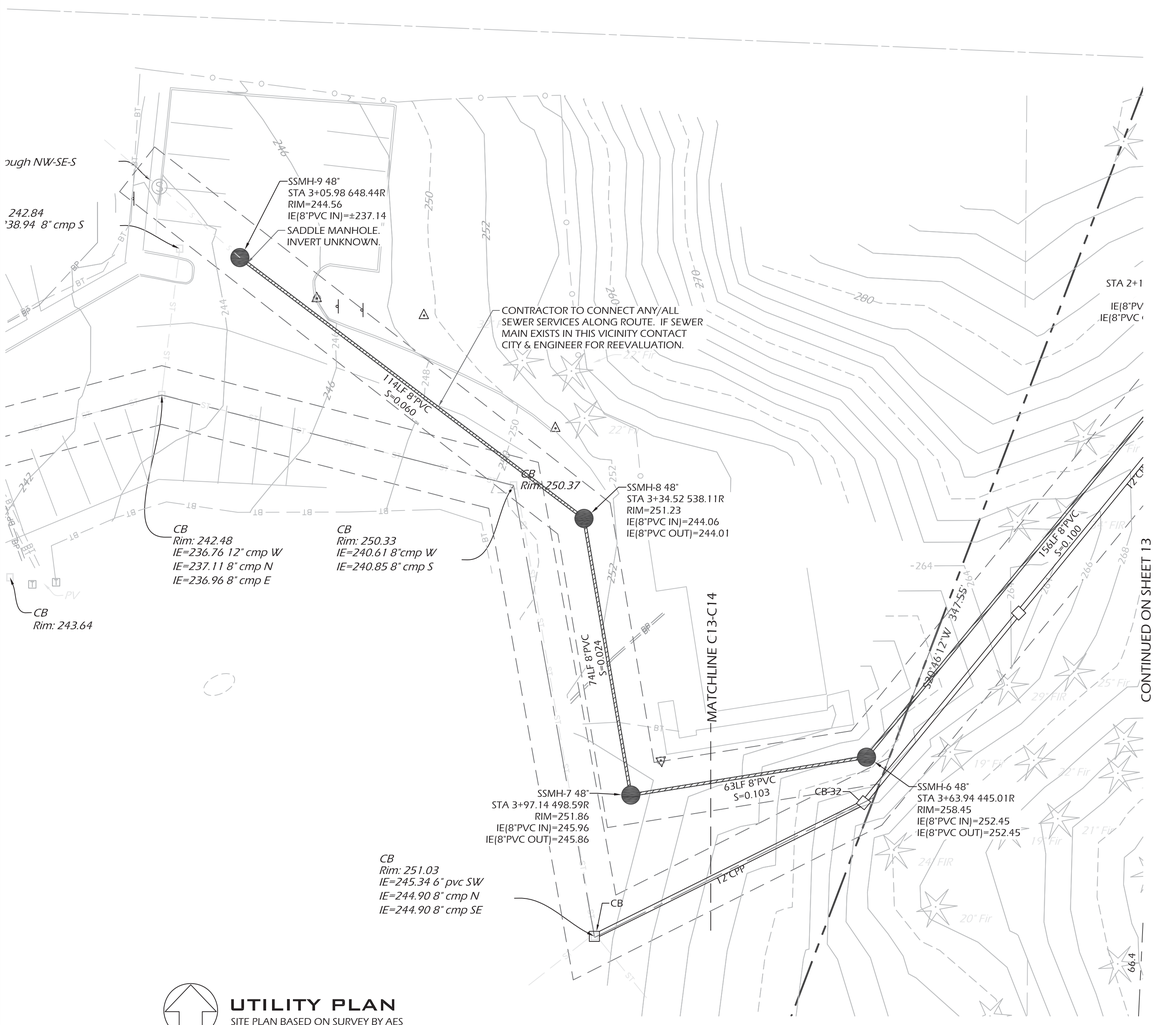
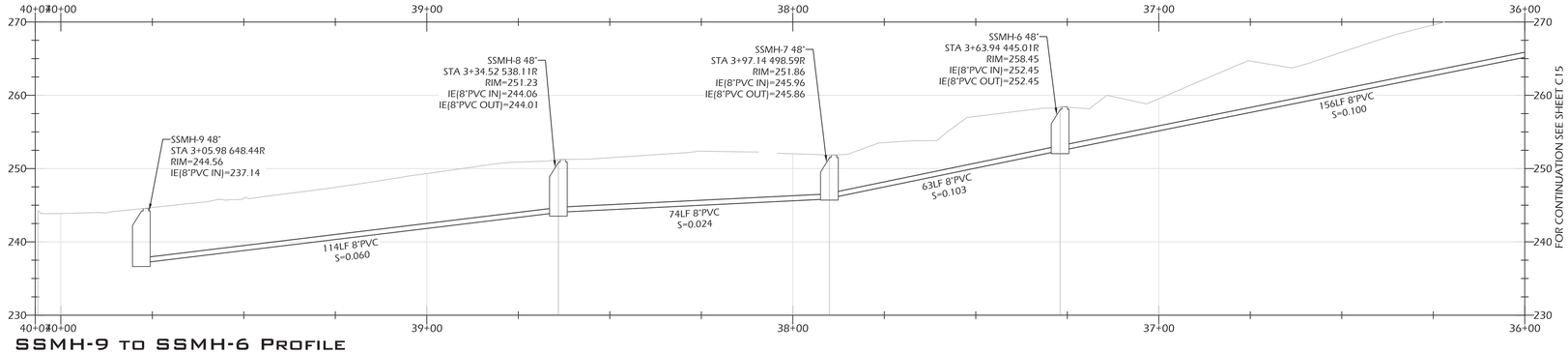
C13
13 OF 22



UTILITY PLAN

SITE PLAN BASED ON SURVEY BY AES CONSULTANTS, INC. DATED 3.28.2022.
DATUM: NAVD88
SCALE: 1" = 20'

0 10 20 40



SSMH-9 TO SSMH-6 PROFILE

SCALE: 1" = 20' H
1" = 10' V
ELEVATIONS SHOWN AT PIPE CENTERLINE

UTILITY PLAN - WEST
WINDWARD ESTATES - 1912 SIDNEY AVENUE
PLAT UTILITY SUBMITTAL

KELSEY E. LAUGHLIN — STATE OF WASHINGTON — 58830 — REGISTERED PROFESSIONAL ENGINEER
12/9/2022

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ENGINEERING LLC
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DRAWN:
CHECKED: K. LAUGHLIN
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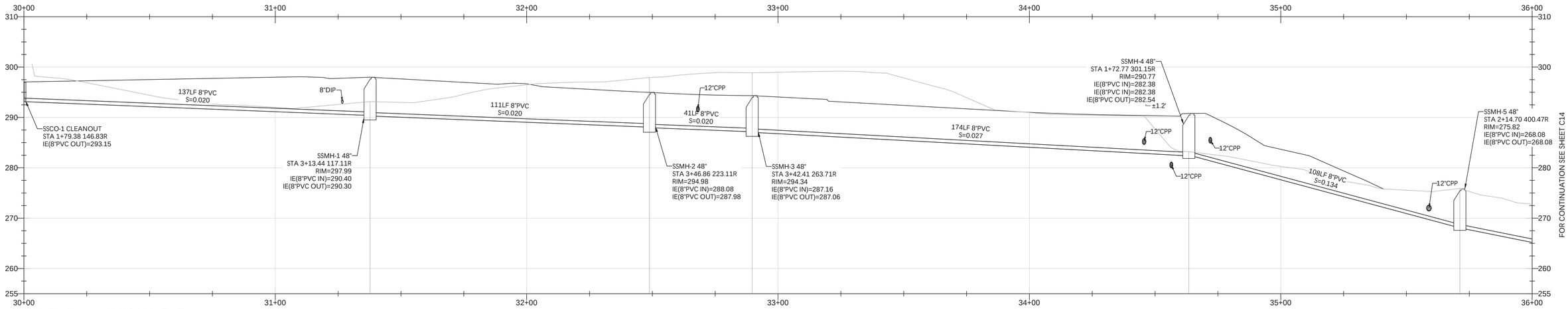
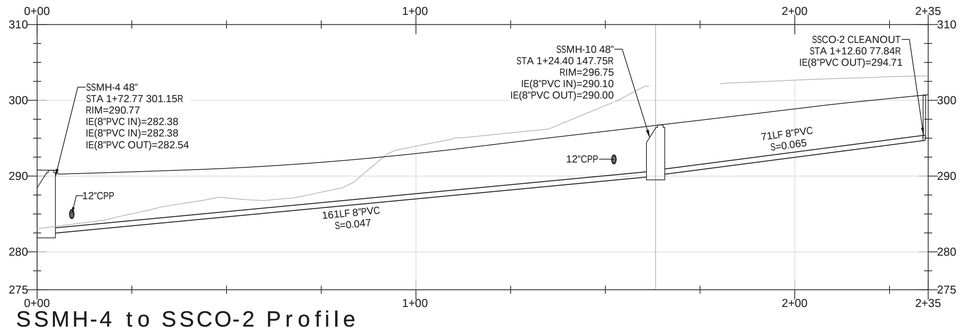
C14
14 OF 22



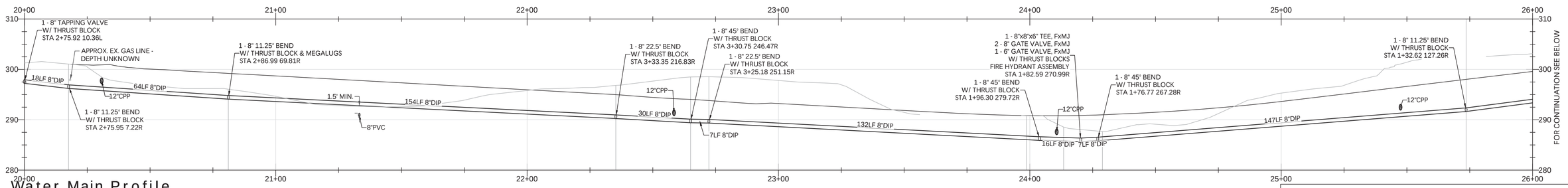
SSCO-1 to SSMH-5 Profile

SCALE: 1" = 20' H
1" = 10' V
ELEVATIONS SHOWN AT PIPE CENTERLINE



SSMH-4 to SSCO-2 Profile

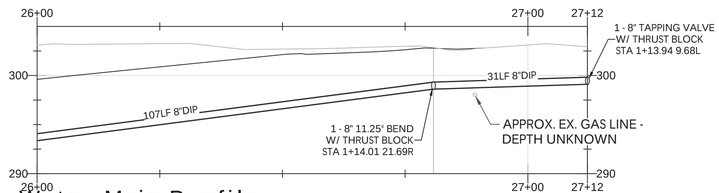
SCALE: 1" = 20' H
1" = 10' V
ELEVATIONS SHOWN AT PIPE CENTERLINE



Water Main Profile

SCALE: 1" = 20' H
1" = 10' V
ELEVATIONS SHOWN AT PIPE CENTERLINE

FOR CONTINUATION SEE ABOVE



Water Main Profile

SCALE: 1" = 20' H
1" = 10' V
ELEVATIONS SHOWN AT PIPE CENTERLINE

UTILITY PROFILES
WINDWARD ESTATES - 1912 SIDNEY AVENUE
PLAT UTILITY SUBMITTAL

12/9/2022

KELSEY E. LAUGHLIN
STATE OF WASHINGTON
48830
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designed: k. laughlin
drawn:
checked: k. laughlin
job no.: MP10.12

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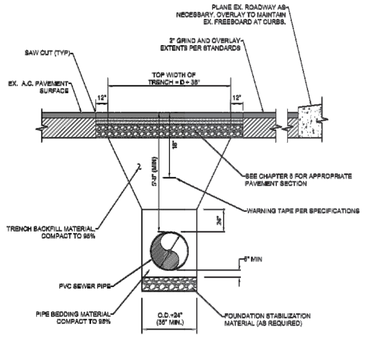
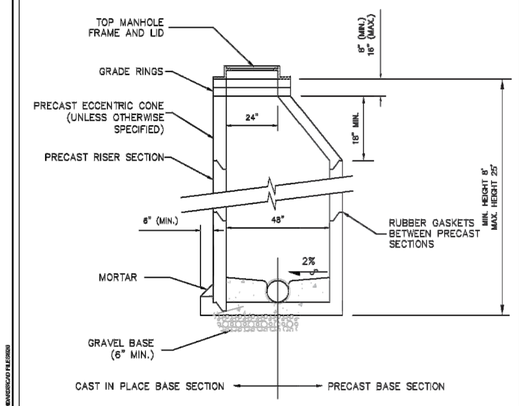
15 OF 22



NOTES:
1) BED THE ENTIRE WIDTH OF THE TRENCH PAVEMENT
2) RESTORATION SHALL BE PER THE APPROPRIATE SECTION IN CHAPTER 8 (PAVEMENT SURFACING).

Port ORCHARD Est. 1890	TRENCHES AND PIPE CONNECTIONS A SEWER TRENCH DETAILS	DRAWN BY	IDS
		DATE	1/23/2019
		SCALE	NTS
		DRAWING NUMBER	803

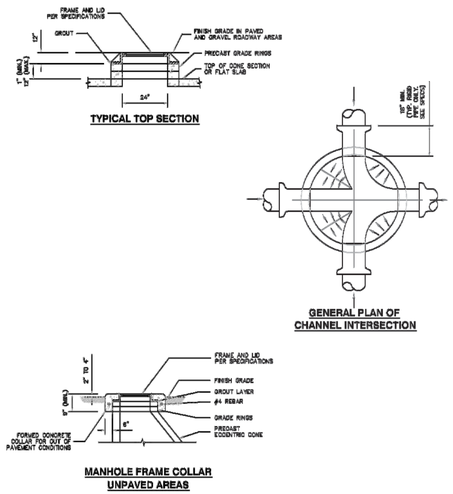
1 C16 SEWER TRENCH DETAILS
NOT TO SCALE



NOTES:
1. MATCH CROWNS OF SEWERS.
2. FOR CAST IN PLACE BASE, CONSTRUCT IN FIELD CHANNEL AND SHELF TO THE CROWN OF THE PIPE.
3. FOR PRECAST BASE, USE GRAVEL BACKFILL, 6" MIN. COMPACTED DEPTH UNDER THE BASE.
4. ALL RIGID PIPE ENTERING OR LEAVING THE MANHOLE SHALL BE PROVIDED WITH FLEXIBLE JOINTS WITHIN 1 ½ PIPE DIAMETERS OF THE MANHOLE STRUCTURE.
5. INSTALL DROP MANHOLE CONNECTION IF INVERT OF ANY INCOMING SEWER IS MORE THAN 2'-0" ABOVE THE TOP OF THE MAIN SEWER.
6. IN UNIMPROVED AREAS AND EASEMENTS, MANHOLE SHALL EXTEND A MINIMUM OF 2" AND A MAXIMUM OF 4" ABOVE FINISHED GRADE.
7. MANHOLE RING AND COVER SHALL HAVE A CLEAR OPENING. WORDING ON COVER SHALL BE "SEWER" IN 3" RAISED LETTERS.
8. ALL MANHOLE JOINTS SHALL USE A CONFINED ROUND RUBBER GASKET MEETING ASTM C-443 SPECIFICAITONS.

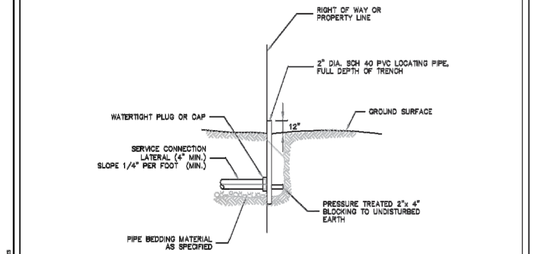
Port ORCHARD Est. 1890	MANHOLES A MANHOLE DETAIL 48"	DRAWN BY	IDS
		DATE	1/30/2019
		SCALE	NTS
		DRAWING NUMBER	803

2 C16 MANHOLE DETAIL 48"
NOT TO SCALE



Port ORCHARD Est. 1890	MANHOLES C TOP SECTION AND CHANNELIZATION	DRAWN BY	IDS
		DATE	1/30/2019
		SCALE	NTS
		DRAWING NUMBER	803

3 C16 TOP SECTION & CHANNELIZATION
NOT TO SCALE



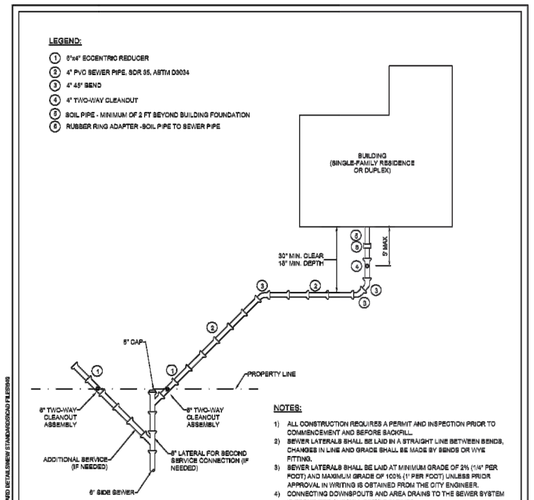
NOTES:

1) PROVIDE SOLID COPPER TRACE WIRE (NO. 10 MIN.) WRAPPED ALONG LENGTH OF SERVICE CONNECTION LATERAL AND MARKER.

2) STENCIL "SEWER" ON LOCATING PIPES AND DEPTH TO INVERT IN 2" HIGH LETTERS.

Port ORCHARD Est. 1890	LATERALS AND SERVICE CONNECTIONS D SERVICE CONNECTION MARKER	DRAWN BY	IDS
		DATE	1/30/2019
		SCALE	NTS
		DRAWING NUMBER	843

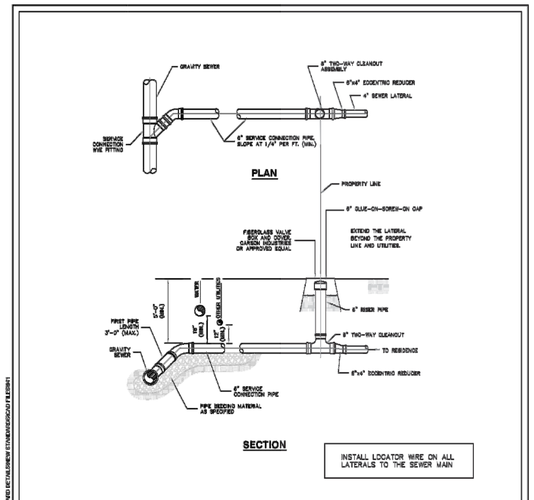
4 C16 SERVICE CONNECTION MARKER
NOT TO SCALE



NOTES:
1) ALL CONSTRUCTION REQUIRES A PERMIT AND INSPECTION PRIOR TO COMMENCEMENT AND BEFORE BACKFILL.
2) SEWER LATERALS SHALL BE LAID IN A STRAIGHT LINE BETWEEN BENDS, CHANGES IN LINE AND GRADE SHALL BE MADE BY BENDS OR WYE FITTINGS.
3) SEWER LATERALS SHALL BE LAID AT MINIMUM GRADE OF 2% (1/4" PER FOOT) AND MAXIMUM GRADE OF 100% (1' PER FOOT) UNLESS PRIOR APPROVAL IN WRITING IS OBTAINED FROM THE CITY ENGINEER.
4) CONNECTING DOWNSPOUTS AND AREA DRAINS TO THE SEWER SYSTEM IS PROHIBITED AND WILL RESULT IN FINES.
5) CLEANOUTS ARE REQUIRED FOR LATERALS EXCEEDING 100 FT., AT ANY BEND EXCEEDING 1/8 BEND (45°) AND WITHIN TEN (10) FT OF A BUILDING FOUNDATION.
6) FROM MAIN TO CLEANOUT AT PROPERTY LINE SHALL BE 6" PIPE. FROM PROPERTY LINE CLEANOUT TO BUILDING SHALL BE 4" FOR SINGLE FAMILY RESIDENCE AND 6" FOR DUPLEX. CLEANOUTS ARE REQUIRED EVERY 100 FEET OR PORTION THEREOF, AT ALL CHANGE OF DIRECTIONS AND AT THE PROPERTY LINE.

Port ORCHARD Est. 1890	LATERALS AND SERVICE CONNECTIONS A TYPICAL SFR SEWER LATERAL	DRAWN BY	IDS
		DATE	1/31/2019
		SCALE	NTS
		DRAWING NUMBER	843

5 C16 TYPICAL SFR SEWER LATERAL
NOT TO SCALE

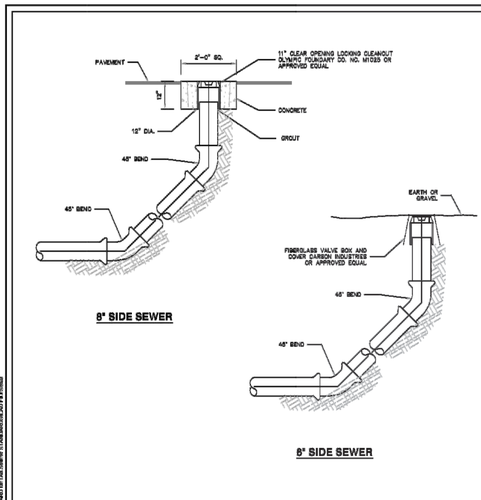


INSTALL LOCATOR WIRE ON ALL LATERALS TO THE SEWER MAIN

NOTE:
CONNECT ALL SERVICE CONNECTIONS 8" AND LARGER AT MANHOLE.
DETAILS TO BE APPROVED BY CITY ENGINEER.

Port ORCHARD Est. 1890	LATERALS AND SERVICE CONNECTIONS B SINGLE SERVICE CONNECTION	DRAWN BY	IDS
		DATE	1/31/2019
		SCALE	NTS
		DRAWING NUMBER	841

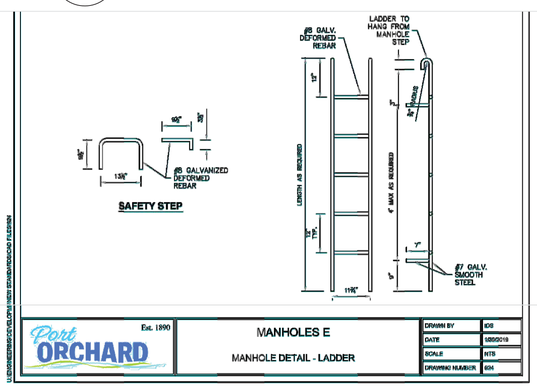
6 C16 SINGLE SERVICE CONNECTION
NOT TO SCALE



NOTES:
1. IF NOT PERMANENT END OF SEWER, USE TYLOX GASKET OR APPROVED EQUAL, AND SECURE WITH #8 WIRE PIN THRU HOLES DRILLED IN HUB. IF PERMANENT END OF SEWER USE MORTAR TO SECURE PLUG.
2. IF INSTALLATION OCCURS IN UNPAVED AREA USE CONCRETE ANCHOR AS SHOWN FOR ASPHALT PAVING AND BACKFILL TO TOP OF CAST IRON RING WITH SOIL.
3. RESTORATION SHALL BE IN ACCORDANCE WITH CHAPTER 8.
4. TRENCH BACKFILL SHALL BE COMPACTED AND TESTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS.

Port ORCHARD Est. 1890	CLEANOUTS A SEWER CLEANOUT DETAIL	DRAWN BY	IDS
		DATE	1/30/2019
		SCALE	NTS
		DRAWING NUMBER	880

7 C16 SEWER CLEANOUT DETAIL
NOT TO SCALE



Port ORCHARD Est. 1890	MANHOLES E MANHOLE DETAIL - LADDER	DRAWN BY	IDS
		DATE	1/30/2019
		SCALE	NTS
		DRAWING NUMBER	804

8 C16 MANHOLE DETAIL - LADDER
NOT TO SCALE

SANITARY SEWER NOTES & DETAILS
WINDWARD ESTATES - 1912 SIDNEY AVENUE
PLAT UTILITY SUBMITTAL

12/9/2022

KELSEY E. LAUGHLIN — STATE OF WASHINGTON — 48830 — REGISTERED PROFESSIONAL ENGINEER

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DESIGNED: K. LAUGHLIN
DRAWN:
CHECKED: K. LAUGHLIN
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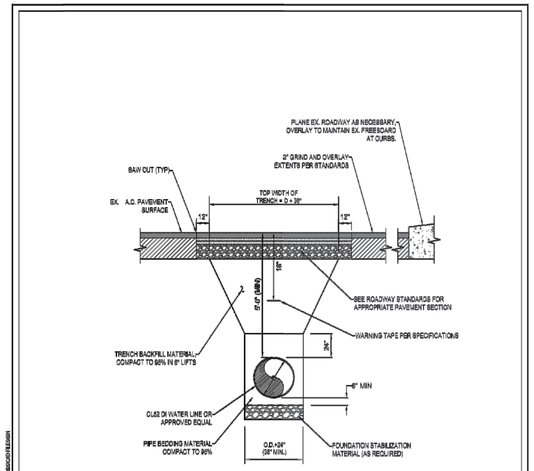
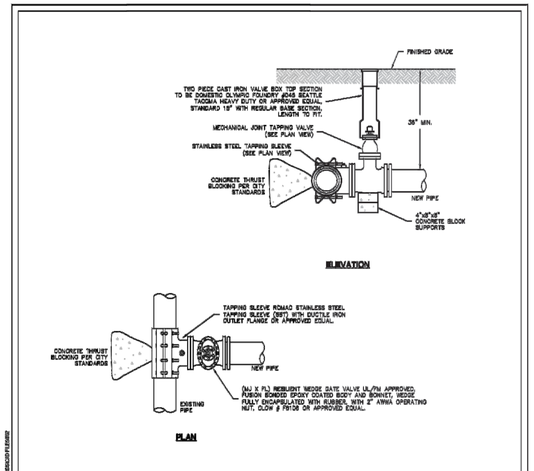


NOTES:
1) BED THE ENTIRE WIDTH OF THE TRENCH PAVEMENT
2) RESTORATION SHALL BE PER THE APPROPRIATE SECTION IN CHAPTER 8 (PAVEMENT SURFACING).
3) INSTALL TRACER WIRE PER SPECIFICATIONS

Est. 1890 Port ORCHARD	RESTORATION, TAPS, AND BLOCKING B	DRAWN BY	IDB
	WATER MAIN TRENCH	DATE	1/03/2019
		SCALE	NTS
		DRAWING NUMBER	801

1 C17 WATER MAIN TRENCH
NOT TO SCALE



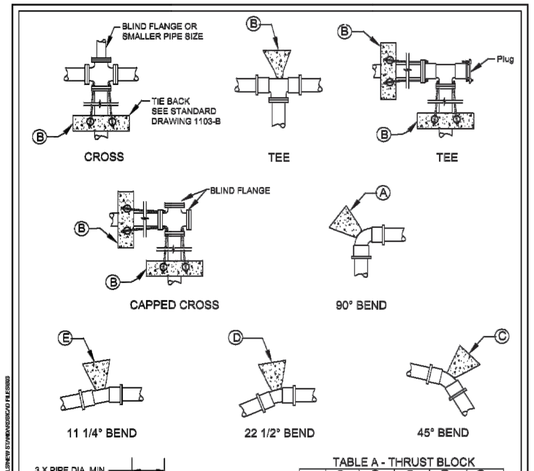
ELEVATION

PLAN

NOTES:
1. PRIOR TO BORING:
   A. TAPPING SLEEVE AND VALVE SHALL BE PRESSURE TESTED AT 200 PSI FOR A PERIOD OF 15 MINUTES. PRESSURE LOSS DURING TESTING SHALL NOT EXCEED 5 PSI.
   B. TAPPING SLEEVE AND VALVE SHALL BE STERILIZED PER SPECIFICATIONS
2. PRIOR TO FINAL CONNECTION OF TAPPING VALVE TO NEW PIPING, THE NEW PIPING SHALL BE PRESSURE TESTED AND STERILIZED PER SPECIFICATIONS

Est. 1890 Port ORCHARD	RESTORATION, TAPS, AND BLOCKING C	DRAWN BY	IDB
	WET TAP	DATE	1/03/2019
		SCALE	NTS
		DRAWING NUMBER	803

2 C17 WET TAP
NOT TO SCALE



TYPICAL CROSS-SECTION

TABLE A - THRUST BLOCK

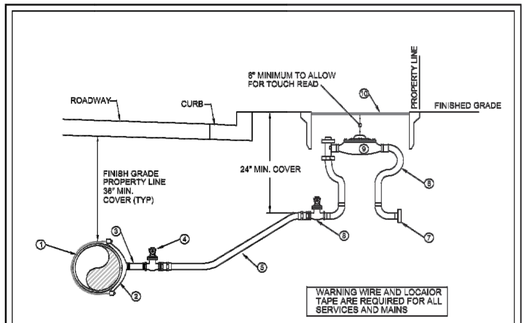
PIPE SIZE	A SQ. FT.	B SQ. FT.	C SQ. FT.	D SQ. FT.	E SQ. FT.
4"	3	2	2	1	1
6"	8	5	4	2	1
8"	11	8	6	3	2
12"	22	16	12	8	3
16"	38	27	21	10	6
18"	46	34	26	14	7
24"	84	59	45	23	13

MIN. BEARING AREA AGAINST UNDISTURBED SOIL

SEE DRAWING 1103-5 FOR ADDITIONAL NOTES

Est. 1890 Port ORCHARD	RESTORATION, TAPS, AND BLOCKING	DRAWN BY	IDB
	THRUST BLOCKING AND TIE BACKS	DATE	1/15/2019
		SCALE	NTS
		DRAWING NUMBER	803-A

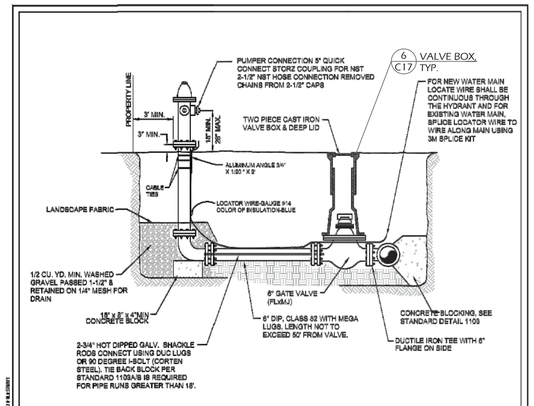
3 C17 THRUST BLOCKING & TIE BACKS
NOT TO SCALE



NOTES:
1. EXISTING WATER MAIN
2. 1" (IP THREAD) SINGLE STRAP SADDLE ROMAC STYLE 101S OR APPROVED EQUAL
3. 1" BRASS NIPPLE, 3" LONG
4. CORP. STOP, FORD FB1100 OR APPROVED EQUAL
5. 1" POLYETHYLENE PIPE, MAINTAIN 36" COVER FROM WATER MAIN TO WITHIN 48" OF METER BOX
6. 1" METER SETTER MUELLER 1434 OR APPROVED EQUAL HORIZONTAL IN, HORIZONTAL OUT. M.I.P. THREAD ENDS.
7. SCHEDULE 40 1" PVC THREADED PLUG. REMOVED WHEN CONNECTION MADE TO CUSTOMER LINE
8. BRASS CURB STOP, FORD B41-444-NL OR EQUAL.
9. WATER METER - TO BE SUPPLIED BY THE CITY
10. METER BOX SHALL BE SIGMA RAVEN HDPE METER BOX MODEL 1324-SW. PROVIDE HDPE LID WITH TOUCH READ AND METER READER LID. PLACE BACK OF METER BOX FLUSH WITH PROPERTY LINE.

Est. 1890 Port ORCHARD	SERVICES A	DRAWN BY	IDB
	5/8, 3/4, OR 1-INCH WATER SERVICE	DATE	1/03/2019
		SCALE	NTS
		DRAWING NUMBER	880

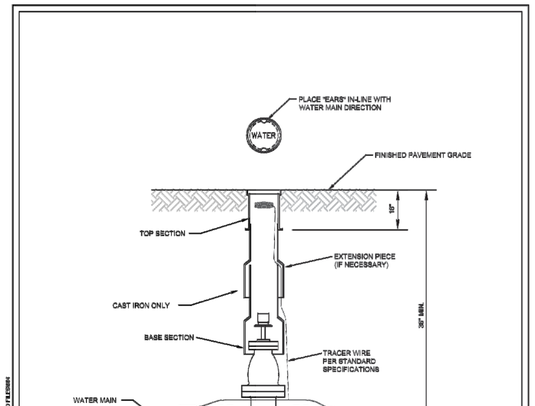
4 C17 WATER SERVICE
NOT TO SCALE



NOTES:
1. MAIN VALVE OPENING SHALL BE 6-1/4" IN DIAMETER EQUAL TO M&H 929. 6" MECHANICAL JOINT INLET. 1-1/2" PENTAGON OPERATING NUT. THE CITY WILL PAINT THE HYDRANT.
2. LOCATOR WIRE TO BE PROTECTED WITH ANGLE ALUMINUM (3/4" X 1/20" X 2' LONG) STRAP TO THE HYDRANT BURY WITH CABLE TIES (.39" LENGTH, 175 LB TENSILE, COLOR BLACK, MANUFACTURED BY 3M). LOCATION SHALL BE BELOW THE LOWER FLANGE OF THE HYDRANT BELOW THE PUMPER PORT. LOCATE WIRE SHALL HAVE 5' BLACK FOR CONNECTING TO LOCATING DEVICE.
3. IF THE PIPE BETWEEN THE VALVE AND THE HYDRANT IS MORE ONE FULL STICK OF DUCTILE IRON PIPE, THEN A TIE BACK THRUST SHALL BE INSTALLED AND FIELD-LOK GASKETS AND MEGA LUGS SHALL BE USED.

Est. 1890 Port ORCHARD	SYSTEM APPURTENANCES B	DRAWN BY	IDB
	FIRE HYDRANT ASSEMBLY	DATE	1/03/2019
		SCALE	NTS
		DRAWING NUMBER	881

5 C17 FIRE HYDRANT ASSEMBLY
NOT TO SCALE



Est. 1890 Port ORCHARD	SYSTEM APPURTENANCES	DRAWN BY	IDB
	VALVE BOX	DATE	1/03/2019
		SCALE	NTS
		DRAWING NUMBER	884

6 C17 VALVE BOX
NOT TO SCALE

WATER NOTES & DETAILS
WINDWARD ESTATES - 1912 SIDNEY AVENUE
PLAT UTILITY SUBMITTAL

12/9/2022
KELSEY E. LAUGHLIN — STATE OF WASHINGTON — 18830 — REGISTERED PROFESSIONAL ENGINEER

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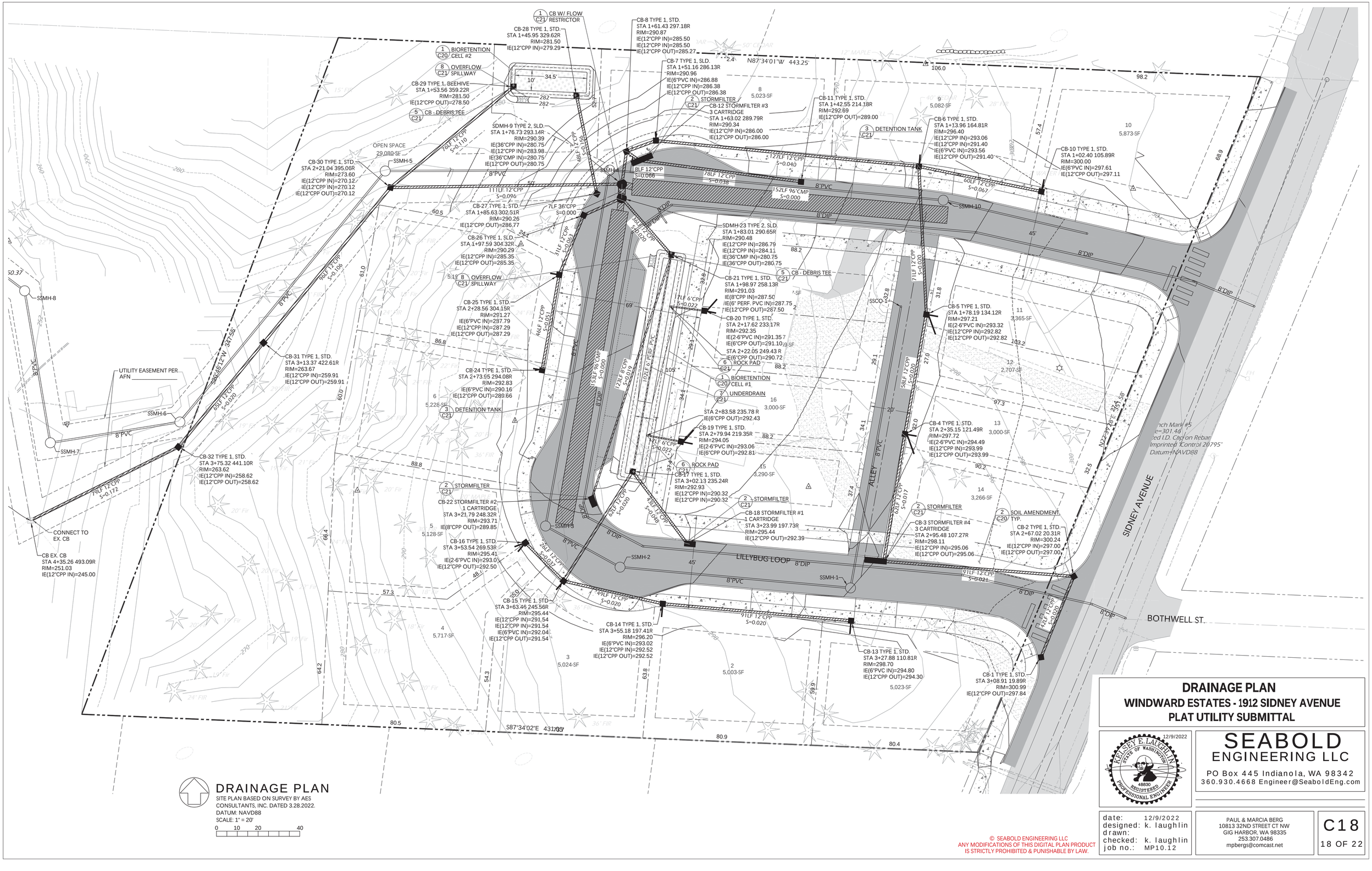
17 OF 22



DRAINAGE PLAN

SITE PLAN BASED ON SURVEY BY AES CONSULTANTS, INC. DATED 3.28.2022.
DATUM: NAVD88
SCALE: 1" = 20'
0 10 20 40

DRAINAGE PLAN
WINDWARD ESTATES - 1912 SIDNEY AVENUE
PLAT UTILITY SUBMITTAL

KELSEY E. LAUGHLIN STATE OF WASHINGTON 48830 REGISTERED PROFESSIONAL ENGINEER 12/9/2022

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designed: k. laughlin
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checked: k. laughlin
job no.: MP10.12

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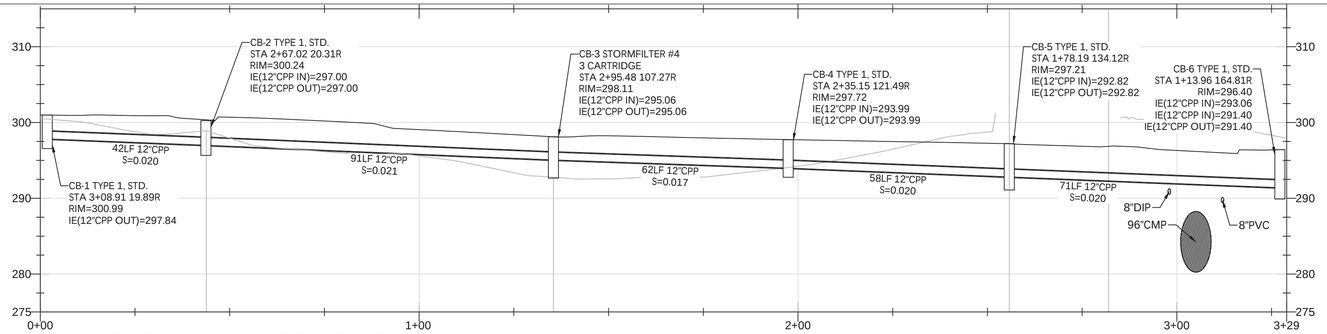
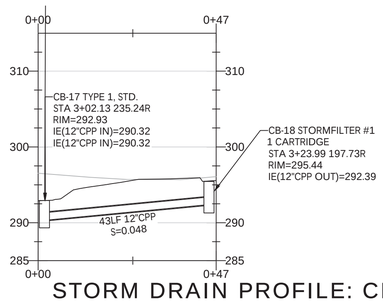
18 OF 22



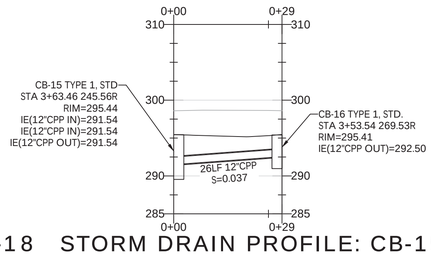
STORM DRAIN PROFILE: CB-1 to CB-6

SCALE: 1" = 20' H
1" = 10' V
ELEVATIONS SHOWN AT PIPE CENTERLINE



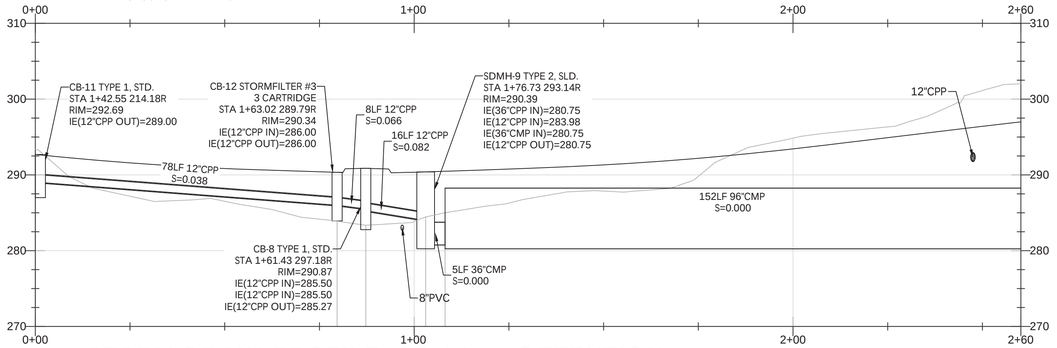
STORM DRAIN PROFILE: CB-17 to CB-18

SCALE: 1" = 20' H
1" = 10' V
ELEVATIONS SHOWN AT PIPE CENTERLINE



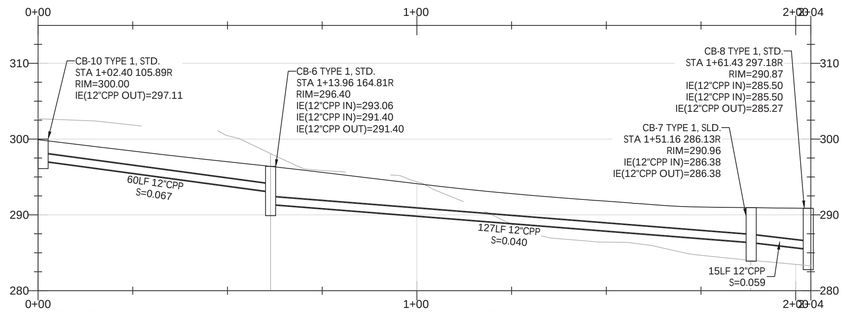
STORM DRAIN PROFILE: CB-15 to CB-16

SCALE: 1" = 20' H
1" = 10' V
ELEVATIONS SHOWN AT PIPE CENTERLINE



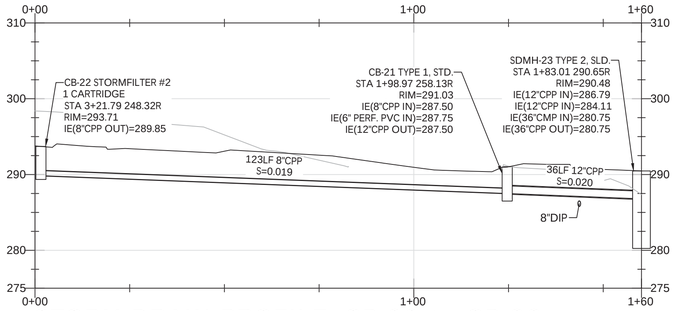
STORM DRAIN PROFILE: CB-11 to DETENTION

SCALE: 1" = 20' H
1" = 10' V
ELEVATIONS SHOWN AT PIPE CENTERLINE



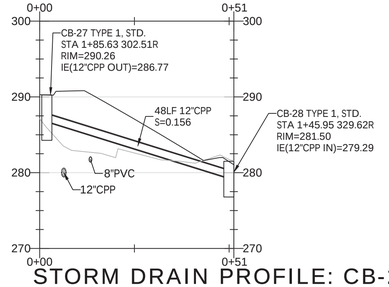
STORM DRAIN PROFILE: CB-10 to CB-8

SCALE: 1" = 20' H
1" = 10' V
ELEVATIONS SHOWN AT PIPE CENTERLINE



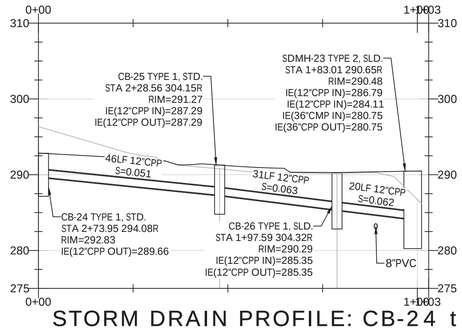
STORM DRAIN PROFILE: CB-22 to CB-23

SCALE: 1" = 20' H
1" = 10' V
ELEVATIONS SHOWN AT PIPE CENTERLINE



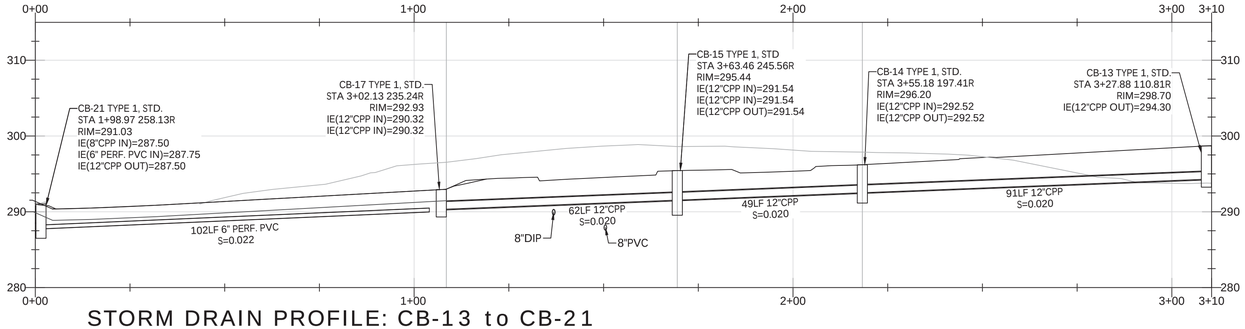
STORM DRAIN PROFILE: CB-27 to CB-28

SCALE: 1" = 20' H
1" = 10' V
ELEVATIONS SHOWN AT PIPE CENTERLINE



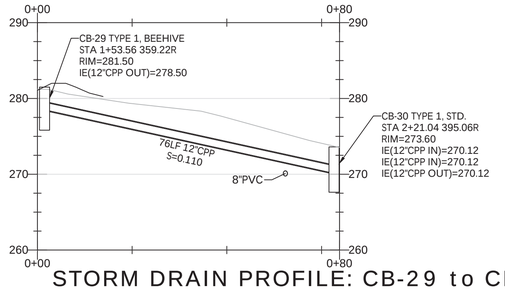
STORM DRAIN PROFILE: CB-24 to CB-23

SCALE: 1" = 20' H
1" = 10' V
ELEVATIONS SHOWN AT PIPE CENTERLINE



STORM DRAIN PROFILE: CB-13 to CB-21

SCALE: 1" = 20' H
1" = 10' V
ELEVATIONS SHOWN AT PIPE CENTERLINE



STORM DRAIN PROFILE: CB-29 to CB-30

SCALE: 1" = 20' H
1" = 10' V
ELEVATIONS SHOWN AT PIPE CENTERLINE

DRAINAGE PROFILES
WINDWARD ESTATES - 1912 SIDNEY AVENUE
PLAT UTILITY SUBMITTAL

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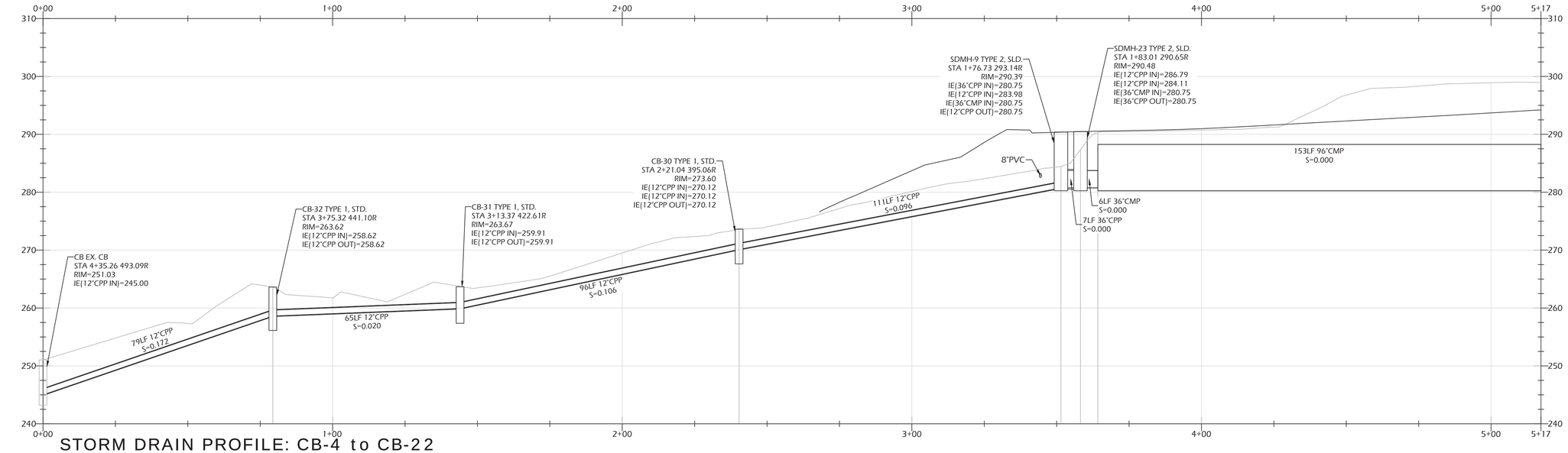
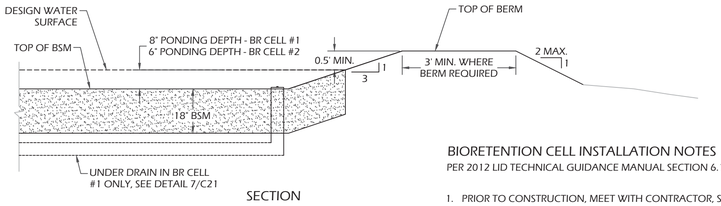


STORM DRAIN PROFILE: CB-4 to CB-22

SCALE: 1" = 20' H
1" = 10' V
ELEVATIONS SHOWN AT PIPE CENTERLINE



SECTION

BIORETENTION SOIL MEDIA GUIDELINES

PER 2012 LID TECHNICAL GUIDANCE MANUAL TABLE 6.1.4

1. BIORETENTION SOIL MIX (BSM) SHOULD CONSIST OF 60% MINERAL AGGREGATE & 40% COMPOST.

2. MINERAL AGGREGATE ACCEPTABLE RANGE (ASTM D 422):

SIEVE SIZE	PERCENT
¾ INCH	100
NO. 4	95-100
NO. 10	75-90
NO. 40	25-40
NO. 100	4-10
NO. 200	2-5

COEFFICIENT OF UNIFORMITY ≥4.

3. COMPOST ACCEPTABLE RANGES:
pH: 6.0 - 8.5 (TMECC 04.11-A)
CARBON NITROGEN RATIO: 25 CARBON:1 NITROGEN. UP TO 35:1 WHEN USING PLANTS COMPOSTED ENTIRELY OF PUGET SOUND NATIVES. (TOC-TMECC 04.01 TKN-TMECC 04.02D)
INERT MATERIAL: ≤1% (TMECC 03.08-A)
ORGANIC CONTENT: 40-65% BY DRY WEIGHT (ASTM D 2974 OR TMECC 05.07A)
RESTRICT LARGE PIECES OF COMPOST: 100% PASSING 1" SIEVE (TMECC 02.02-B)
FEED STOCK COMPOSITION: ≤35% TYPE III STOCK, ≥65% TYPE I STOCK (WAC 173-350-100)
MATURITY INDICATOR: >80% (TMECC 05.05-A)
STABILITY INDICATOR: ≤7 (TMECC 05.08-B)
COPPER CONTENT: <750 mg/kg (EPA 6020)
ZINC CONTENT: <1400 mg/kg (EPA 6020)
SOLUBLE SALT: <4 mmhos/cm (TMECC 04.10-A)

1/C20 BIORETENTION CELL
NOT TO SCALE

BIORETENTION CELL INSTALLATION NOTES

PER 2012 LID TECHNICAL GUIDANCE MANUAL SECTION 6.1.2.3

1. PRIOR TO CONSTRUCTION, MEET WITH CONTRACTOR, SUBCONTRACTORS, CONSTRUCTION MANAGEMENT, AND INSPECTION STAFF TO REVIEW CRITICAL DESIGN ELEMENTS AND CONFIRM SPECIFICATION REQUIREMENTS, PROPER CONSTRUCTION PROCEDURES, CONSTRUCTION SEQUENCING AND INSPECTION TIMING.

2. RUNOFF FROM CONSTRUCTION ACTIVITY SHOULD NOT BE ALLOWED INTO BIORETENTION AREAS UNLESS THERE IS NO OTHER OPTION FOR CONVEYING CONSTRUCTION STORMWATER. ENSURE THERE IS ADEQUATE PROTECTION OF THE SUBGRADE SOIL AND BIORETENTION SOIL MEDIA (BSM), AND INTRODUCTION OF STORMWATER IS APPROVED BY THE PROJECT ENGINEER.

3. EXCAVATION SHOULD NEVER BE PERFORMED DURING WET OR SATURATED CONDITIONS. EXCAVATION SHOULD BE PERFORMED BY MACHINERY OPERATING ADJACENT TO THE BIORETENTION FACILITY AND NO HEAVY EQUIPMENT WITH NARROW TRACKS, NARROW TIRES, OR LARGE LUGGED, HIGH PRESSURE TIRES SHOULD BE ALLOWED ON THE BOTTOM OF THE BIORETENTION FACILITY. IF MACHINERY MUST OPERATE IN THE BIORETENTION CELL FOR EXCAVATION, USE LIGHT WEIGHT, LOW GROUND-CONTACT PRESSURE EQUIPMENT AND RIP THE BASE AT COMPLETION TO RE-FRACTURE SOIL TO A MINIMUM OF 12-INCHES. IF MACHINERY OPERATES IN THE FACILITY, SUBGRADE INFILTRATION RATES MUST BE FIELD TESTED AND COMPARED TO DESIGN RATES AND VERIFIED BY THE ENGINEER OF RECORD.

4. ON-SITE SOIL MIXING OR PLACEMENT SHOULD NOT BE PERFORMED IF BSM OR SUBGRADE SOIL IS SATURATED. BSM SHOULD BE PLACED AND GRADED BY MACHINERY OPERATING ADJACENT TO BIORETENTION FACILITY.

5. SOIL MIX SHOULD BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED 12-INCHES PER LIFT FOR THE ENTIRE AREA OF THE BIORETENTION FACILITY.

6. COMPACT THE BSM TO A RELATIVE COMPACTION OF 85% OF MODIFIED MAXIMUM DRY DENSITY (ASTM D 1557). COMPACTION CAN BE ACHIEVED BY BOOT PACKING AND THEN APPLY 0.2-INCH OF WATER PER 1-INCH OF BSM DEPTH. WATER FOR SETTLING SHOULD BE APPLIED BY SPRAYING OR SPRINKLING.

7. IF USING BSM GUIDELINES IN 2012 LID TECHNICAL MANUAL SECTION 6.1.2.2 ONLY VERIFICATION OF MINERAL AGGREGATE GRADATION, COMPOST GUIDELINES AND MIX RATIO ARE REQUIRED.

BMP T5.13: POST-CONSTRUCTION SOIL QUALITY AND DEPTH

PER VOL. V OF 2014 SWMMWW

PURPOSE AND DEFINITION

NATURALLY OCCURRING (UNDISTURBED) SOIL AND VEGETATION PROVIDE IMPORTANT STORMWATER FUNCTIONS INCLUDING: WATER INFILTRATION; NUTRIENT, SEDIMENT, AND POLLUTANT ADSORPTION; SEDIMENT AND POLLUTANT BIOFILTRATION; WATER INTERFLOW STORAGE AND TRANSMISSION; AND POLLUTANT DECOMPOSITION. THESE FUNCTIONS ARE LARGELY LOST WHEN DEVELOPMENT STRIPS AWAY NATIVE SOIL AND VEGETATION AND REPLACES IT WITH MINIMAL TOPSOIL AND SOD. NOT ONLY ARE THESE IMPORTANT STORMWATER FUNCTIONS LOST, BUT SUCH LANDSCAPES THEMSELVES BECOME POLLUTION GENERATING PERVIOUS SURFACES DUE TO INCREASED USE OF PESTICIDES, FERTILIZERS AND OTHER LANDSCAPING AND HOUSEHOLD/INDUSTRIAL CHEMICALS, THE CONCENTRATION OF PET WASTES, AND POLLUTANTS THAT ACCOMPANY ROADSIDE LITTER.

ESTABLISHING SOIL QUALITY AND DEPTH REGAINS GREATER STORMWATER FUNCTIONS IN THE POST DEVELOPMENT LANDSCAPE, PROVIDES INCREASED TREATMENT OF POLLUTANTS AND SEDIMENTS THAT RESULT FROM DEVELOPMENT AND HABITATION, AND MINIMIZES THE NEED FOR SOME LANDSCAPING CHEMICALS, THUS REDUCING POLLUTION THROUGH PREVENTION.

APPLICATIONS AND LIMITATIONS

ESTABLISHING A MINIMUM SOIL QUALITY AND DEPTH IS NOT THE SAME AS PRESERVATION OF NATURALLY OCCURRING SOIL AND VEGETATION. HOWEVER, ESTABLISHING A MINIMUM SOIL QUALITY AND DEPTH WILL PROVIDE IMPROVED ON-SITE MANAGEMENT OF STORMWATER FLOW AND WATER QUALITY.

SOIL ORGANIC MATTER CAN BE ATTAINED THROUGH NUMEROUS MATERIALS SUCH AS COMPOST, COMPOSTED WOODY MATERIAL, BIOSOLIDS, AND FOREST PRODUCT RESIDUALS. IT IS IMPORTANT THAT THE MATERIALS USED TO MEET THE SOIL QUALITY AND DEPTH BMP BE APPROPRIATE AND BENEFICIAL TO THE PLANT COVER TO BE ESTABLISHED. LIKEWISE, IT IS IMPORTANT THAT IMPORTED TOPSOILS IMPROVE SOIL CONDITIONS AND DO NOT HAVE AN EXCESSIVE PERCENT OF CLAY FINES.

THIS BMP CAN BE CONSIDERED INFEASIBLE ON TILL SOIL SLOPES GREATER THAN 33 PERCENT.

DESIGN GUIDELINES

- SOIL RETENTION. RETAIN, IN AN UNDISTURBED STATE, THE DUFF LAYER AND NATIVE TOPSOIL TO THE MAXIMUM EXTENT PRACTICABLE. IN ANY AREAS REQUIRING GRADING REMOVE AND STOCKPILE THE DUFF LAYER AND TOPSOIL ON SITE IN A DESIGNATED, CONTROLLED AREA, NOT ADJACENT TO PUBLIC RESOURCES AND CRITICAL AREAS, TO BE REAPPLIED TO OTHER PORTIONS OF THE SITE WHERE FEASIBLE.
- SOIL QUALITY. ALL AREAS SUBJECT TO CLEARING AND GRADING THAT HAVE NOT BEEN COVERED BY IMPERVIOUS SURFACE, INCORPORATED INTO A DRAINAGE FACILITY OR ENGINEERED AS STRUCTURAL FILL OR SLOPE SHALL, AT PROJECT COMPLETION, DEMONSTRATE THE FOLLOWING:
  1. A TOPSOIL LAYER WITH A MINIMUM ORGANIC MATTER CONTENT OF 10% DRY WEIGHT IN PLANTING BEDS, AND 5% ORGANIC MATTER CONTENT IN TURF AREAS, AND A PH FROM 6.0 TO 8.0 OR MATCHING THE PH OF THE UNDISTURBED SOIL. THE TOPSOIL LAYER SHALL HAVE A MINIMUM DEPTH OF EIGHT INCHES EXCEPT WHERE TREE ROOTS LIMIT THE DEPTH OF INCORPORATION OF AMENDMENTS NEEDED TO MEET THE CRITERIA. SUBSOILS BELOW THE TOPSOIL LAYER SHOULD BE SCARIFIED AT LEAST 4 INCHES WITH SOME INCORPORATION OF THE UPPER MATERIAL TO AVOID STRATIFIED LAYERS, WHERE FEASIBLE.
  2. MULCH PLANTING BEDS WITH 2 INCHES OF ORGANIC MATERIAL
  3. USE COMPOST AND OTHER MATERIALS THAT MEET THESE ORGANIC CONTENT REQUIREMENTS:

     a. THE ORGANIC CONTENT FOR "PRE-APPROVED" AMENDMENT RATES CAN BE MET ONLY USING COMPOST MEETING THE COMPOST SPECIFICATION FOR BIORETENTION (BMP T7.30), WITH THE EXCEPTION THAT THE COMPOST MAY HAVE UP TO 35% BIOSOLIDS OR MANURE.

     THE COMPOST MUST ALSO HAVE AN ORGANIC MATTER CONTENT OF 40%TO 65%, AND A CARBON TO NITROGEN RATIO BELOW 25:1.

     THE CARBON TO NITROGEN RATIO MAY BE AS HIGH AS 35:1 FOR PLANTINGS COMPOSED ENTIRELY OF PLANTS NATIVE TO THE PUGET SOUND LOWLANDS REGION.

     b. CALCULATED AMENDMENT RATES MAY BE MET THROUGH USE OF COMPOSTED MATERIAL MEETING (A.) ABOVE; OR OTHER ORGANIC MATERIALS AMENDED TO MEET THE CARBON TO NITROGEN RATIO REQUIREMENTS, AND NOT EXCEEDING THE CONTAMINANT LIMITS IDENTIFIED IN TABLE 220-B, TESTING PARAMETERS, IN WAC 173-350-220.

     THE RESULTING SOIL SHOULD BE CONDUCIVE TO THE TYPE OF VEGETATION TO BE ESTABLISHED.
- IMPLEMENTATION OPTIONS: THE SOIL QUALITY DESIGN GUIDELINES LISTED ABOVE CAN BE MET BY USING ONE OF THE METHODS LISTED BELOW:
  1. LEAVE UNDISTURBED NATIVE VEGETATION AND SOIL, AND PROTECT FROM COMPACTION DURING CONSTRUCTION.
  2. AMEND EXISTING SITE TOPSOIL OR SUBSOIL EITHER AT DEFAULT "PRE-APPROVED" RATES, OR AT CUSTOM CALCULATED RATES BASED ON TESTS OF THE SOIL AND AMENDMENT.
  3. STOCKPILE EXISTING TOPSOIL DURING GRADING, AND REPLACE IT PRIOR TO PLANTING. STOCKPILED TOPSOIL MUST ALSO BE AMENDED IF NEEDED TO MEET THE ORGANIC MATTER OR DEPTH REQUIREMENTS, EITHER AT A DEFAULT "PRE-APPROVED" RATE OR AT A CUSTOM CALCULATED RATE.
  4. IMPORT TOPSOIL MIX OF SUFFICIENT ORGANIC CONTENT AND DEPTH TO MEET THE REQUIREMENTS.

  MORE THAN ONE METHOD MAY BE USED ON DIFFERENT PORTIONS OF THE SAME SITE. SOIL THAT ALREADY MEETS THE DEPTH AND ORGANIC MATTER QUALITY STANDARDS, AND IS NOT COMPACTED, DOES NOT NEED TO BE AMENDED.

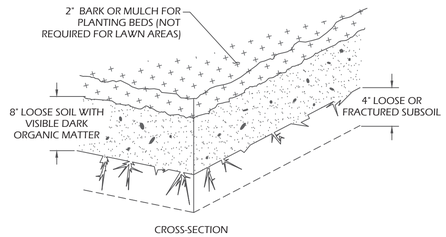
MAINTENANCE

ESTABLISH SOIL QUALITY AND DEPTH TOWARD THE END OF CONSTRUCTION AND ONCE ESTABLISHED, PROTECT FROM COMPACTION, SUCH AS FROM LARGE MACHINERY USE, AND FROM EROSION.

PLANT VEGETATION AND MULCH THE AMENDED SOIL AREA AFTER INSTALLATION.

LEAVE PLANT DEBRIS OR ITS EQUIVALENT ON THE SOIL SURFACE TO REPLENISH ORGANIC MATTER.

REDUCE AND ADJUST, WHERE POSSIBLE, THE USE OF IRRIGATION, FERTILIZERS, HERBICIDES AND PESTICIDES, RATHER THAN CONTINUING TO IMPLEMENT FORMERLY ESTABLISHED PRACTICES.



CROSS-SECTION

2/C20 SOIL AMENDMENT
NOT TO SCALE
PER SWMMWW BMP T5.13

DRAINAGE DETAILS
WINDWARD ESTATES - 1912 SIDNEY AVENUE
PLAT UTILITY SUBMITTAL

KELSEY E. LAUGHLIN
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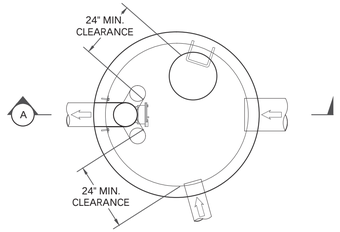
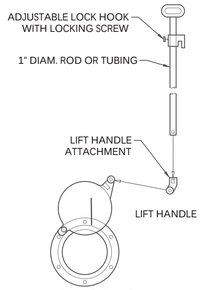
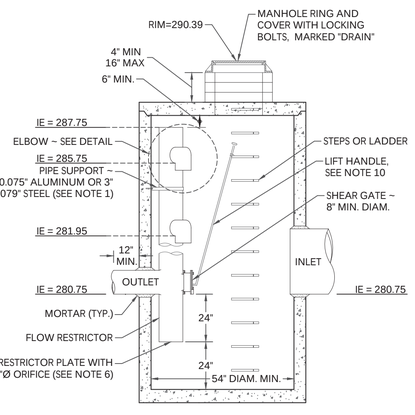
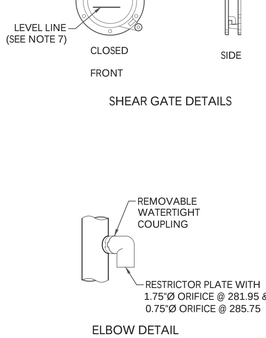


PLAN VIEW





SECTION (A)



SHEAR GATE DETAILS

ELBOW DETAIL

1 C21 CB WITH FLOW RESTRICTOR

PER WSDOT STANDARD PLAN B-10.40-01
NOT TO SCALE

NOTES:

1. THE PIPE SUPPORTS AND THE FLOW RESTRICTOR SHALL BE CONSTRUCTED OF THE SAME MATERIAL AND BE ANCHORED AT A MAXIMUM SPACING OF 36' (IN). ATTACH THE PIPE SUPPORTS TO THE MANHOLE WITH 5/8" (IN) STAINLESS STEEL EXPANSION BOLTS OR EMBED THE SUPPORTS INTO THE MANHOLE WALL 2" (IN).
2. THE VERTICAL RISER STEM OF THE FLOW RESTRICTOR SHALL BE THE SAME DIAMETER AS THE HORIZONTAL OUTLET PIPE WITH A MINIMUM DIAMETER OF 8" (IN).
3. THE FLOW RESTRICTOR SHALL BE FABRICATED FROM ONE OF THE FOLLOWING MATERIALS:
   0.060" (IN) CORRUGATED ALUMINUM ALLOY DRAIN PIPE
   0.064" (IN) CORRUGATED GALVANIZED STEEL DRAIN PIPE WITH TREATMENT 1
   0.064" (IN) CORRUGATED ALUMINIZED STEEL DRAIN PIPE
   0.060" (IN) ALUMINUM ALLOY FLAT SHEET, IN ACCORDANCE WITH ASTM B 209, 5052 H32 OR EPS
   HIGH DENSITY POLYETHYLENE STORM SEWER PIPE
4. THE FRAME AND LADDER OR STEPS ARE TO BE OFFSET SO THAT: THE SHEAR GATE IS VISIBLE FROM THE TOP; THE CLIMB-DOWN SPACE IS CLEAR OF THE RISER AND GATE; THE FRAME IS CLEAR OF THE CURB.
5. THE MULTI-ORIFICE ELBOWS MAY BE LOCATED AS SHOWN, OR ALL PLACED ON ONE SIDE OF THE RISER TO ASSURE LADDER CLEARANCE. THE SIZE OF THE ELBOWS AND THEIR PLACEMENT SHALL BE SPECIFIED IN THE CONTRACT.
6. RESTRICTOR PLATE WITH 0.80'Ø ORIFICE. THE OPENING IS TO BE CUT ROUND AND SMOOTH.
7. THE SHEAR GATE SHALL BE MADE OF ALUMINUM ALLOY IN ACCORDANCE WITH ASTM B 26 AND ASTM B 275, DESIGNATION ZG32A; OR CAST IRON IN ACCORDANCE WITH ASTM A 48, CLASS 30B.

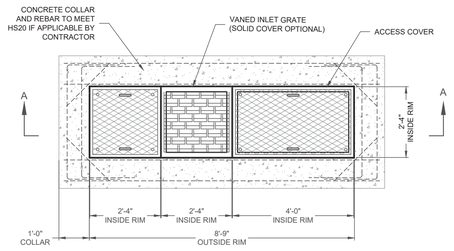
   THE LIFT HANDLE SHALL BE MADE OF A SIMILAR METAL TO THE GATE (TO PREVENT GALVANIC CORROSION), IT MAY BE OF SOLID ROD OR HOLLOW TUBING, WITH ADJUSTABLE HOOK AS REQUIRED.

   A NEOPRENE RUBBER GASKET IS REQUIRED BETWEEN THE RISER MOUNTING FLANGE AND THE GATE FLANGE.

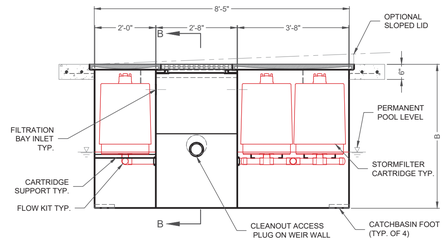
   INSTALL THE GATE SO THAT THE LEVEL-LINE MARK IS LEVEL WHEN THE GATE IS CLOSED.

   THE MATING SURFACES OF THE LID AND THE BODY SHALL BE MACHINED FOR PROPER FIT.

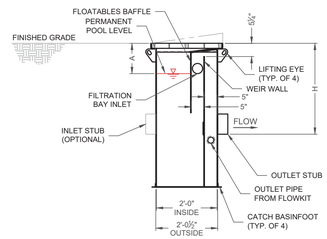
   ALL SHEAR GATE BOLTS SHALL BE STAINLESS STEEL.
8. THE SHEAR GATE MAXIMUM OPENING SHALL BE CONTROLLED BY LIMITED HINGE MOVEMENT, A STOP TAB, OR SOME OTHER DEVICE.
9. ALTERNATIVE SHEAR GATE DESIGNS ARE ACCEPTABLE IF MATERIAL SPECIFICATIONS ARE MET.
10. LIFT HANDLE SHALL BE LOCATED WITHIN 18" OF RIM.



PLAN VIEW



SECTION A-A



SECTION B-B

2 C21 STORMFILTER

PER CONTECH 3 CARTRIDGE CATCH BASIN STORMFILTER
NOT TO SCALE

STORMFILTER STEEL CATCHBASIN DESIGN NOTES

STORMFILTER TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE SELECTION AND THE NUMBER OF CARTRIDGES. 3 CARTRIDGE CATCHBASIN HAS A MAXIMUM OF THREE CARTRIDGES. SYSTEM IS SHOWN WITH A 27" CARTRIDGE, AND IS ALSO AVAILABLE WITH AN 18" CARTRIDGE. STORMFILTER CATCHBASIN CONFIGURATIONS ARE AVAILABLE WITH A DRY INLET BAY FOR VECTOR CONTROL.
PEAK HYDRAULIC CAPACITY PER TABLE BELOW. IF THE SITE CONDITIONS EXCEED PEAK HYDRAULIC CAPACITY, AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

CARTRIDGE SELECTION

	27"			18"			18" DEEP		
CARTRIDGE HEIGHT	27"			18"			3.3'		
RECOMMENDED HYDRAULIC DROP (H)	3.05'			2.3'			3.3'		
SPECIFIC FLOW RATE (gpm/sf)	2 gpm/sf	1.67* gpm/sf	1 gpm/sf	2 gpm/sf	1.67* gpm/sf	1 gpm/sf	2 gpm/sf	1.67* gpm/sf	1 gpm/sf
CARTRIDGE FLOW RATE (gpm)	22.5	18.79	11.25	15	12.53	7.5	15	12.53	7.5
PEAK HYDRAULIC CAPACITY	1.0			1.0			1.8		
INLET PERMANENT POOL LEVEL (A)	1'-0"			1'-0"			2'-0"		
OVERALL STRUCTURE HEIGHT (B)	4'-9"			3'-9"			4'-9"		

* 1.67 gpm/sf SPECIFIC FLOW RATE IS APPROVED WITH PHOSPHOSORB® (PSORB) MEDIA ONLY

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STORMFILTER CATCHBASIN STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.contechES.com
3. STORMFILTER CATCHBASIN WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
4. INLET SHOULD NOT BE LOWER THAN OUTLET. INLET (IF APPLICABLE) AND OUTLET PIPING TO BE SPECIFIED BY ENGINEER AND PROVIDED BY CONTRACTOR.
5. MANUFACTURER TO APPLY A SURFACE BEAD WELD IN THE SHAPE OF THE LETTER "O" ABOVE THE OUTLET PIPE STUB ON THE EXTERIOR SURFACE OF THE STEEL SFCB.
6. STORMFILTER CATCHBASIN EQUIPPED WITH 4 INCH (APPROXIMATE) LONG STUBS FOR INLET (IF APPLICABLE) AND OUTLET PIPING. STANDARD OUTLET STUB IS 8 INCHES IN DIAMETER. MAXIMUM OUTLET STUB IS 15 INCHES IN DIAMETER. CONNECTION TO COLLECTION PIPING CAN BE MADE USING FLEXIBLE COUPLING BY CONTRACTOR.
7. STEEL STRUCTURE TO BE MANUFACTURED OF 1/4 INCH STEEL PLATE. CASTINGS SHALL MEET AASHTO M306 LOAD RATING. TO MEET HS20 LOAD RATING ON STRUCTURE, A CONCRETE COLLAR IS REQUIRED. WHEN REQUIRED, CONCRETE COLLAR WITH #4 REINFORCING BARS TO BE PROVIDED BY CONTRACTOR.
8. FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF CLEANING. RADIAL MEDIA DEPTH SHALL BE 7-INCHES. FILTER MEDIA CONTACT TIME SHALL BE AT LEAST 38 SECONDS.
9. SPECIFIC FLOW RATE IS EQUAL TO THE FILTER TREATMENT CAPACITY (gpm) DIVIDED BY THE FILTER CONTACT SURFACE AREA (sq ft).

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CATCHBASIN (LIFTING CLUTCHES PROVIDED).
C. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.

CONTECH ENGINEERED SOLUTIONS LLC
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-526-3999 513-645-7000 513-645-7993 FAX

1-CARTRIDGE CATCHBASIN STORMFILTER DATA

STRUCTURE ID		CB-18
WATER QUALITY FLOW RATE (cfs)		0.0194
PEAK FLOW RATE (<1 cfs)		0.108
RETURN PERIOD OF PEAK FLOW (yrs)		100
CARTRIDGE HEIGHT (27", 18", 18" DEEP)		XX
CARTRIDGE FLOW RATE (gpm)		11.25
MEDIA TYPE (PERLITE, ZPG, PSORB)		ZPG
RIM ELEVATION		295.44
PIPE DATA:	I.E.	DIAMETER
INLET STUB	-	-
OUTLET STUB	292.39	8"

CONFIGURATION: OUTLET, INLET, INLET, OUTLET, INLET

SLOPED LID	YES\NO
SOLID COVER	YES\NO
NOTES/SPECIAL REQUIREMENTS:	

3-CARTRIDGE CATCHBASIN STORMFILTER DATA

STRUCTURE ID		CB-12
WATER QUALITY FLOW RATE (cfs)		0.055
PEAK FLOW RATE (<1 cfs)		0.428
RETURN PERIOD OF PEAK FLOW (yrs)		100
CARTRIDGE HEIGHT (27", 18", 18" DEEP)		XX
CARTRIDGE FLOW RATE (gpm)		11.25
MEDIA TYPE (PERLITE, ZPG, PSORB)		ZPG
RIM ELEVATION		290.34
PIPE DATA:	I.E.	DIAMETER
INLET STUB	286.00	12"
OUTLET STUB	286.00	12"

CONFIGURATION: OUTLET, INLET, OUTLET, INLET

SLOPED LID	YES\NO
SOLID COVER	YES\NO
NOTES/SPECIAL REQUIREMENTS:	

1-CARTRIDGE CATCHBASIN STORMFILTER DATA

STRUCTURE ID		CB-22
WATER QUALITY FLOW RATE (cfs)		0.021
PEAK FLOW RATE (<1 cfs)		0.176
RETURN PERIOD OF PEAK FLOW (yrs)		100
CARTRIDGE HEIGHT (27", 18", 18" DEEP)		XX
CARTRIDGE FLOW RATE (gpm)		11.25
MEDIA TYPE (PERLITE, ZPG, PSORB)		ZPG
RIM ELEVATION		293.71
PIPE DATA:	I.E.	DIAMETER
INLET STUB	-	-
OUTLET STUB	289.85	8"

CONFIGURATION: OUTLET, INLET, OUTLET, INLET, INLET

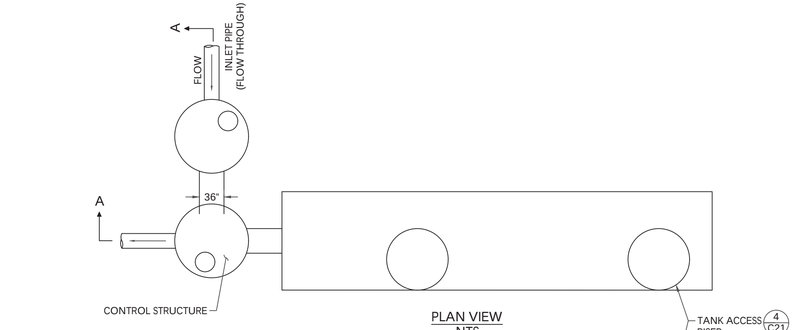
SLOPED LID	YES\NO
SOLID COVER	YES\NO
NOTES/SPECIAL REQUIREMENTS:	

3-CARTRIDGE CATCHBASIN STORMFILTER DATA

STRUCTURE ID		CB-3
WATER QUALITY FLOW RATE (cfs)		0.064
PEAK FLOW RATE (<1 cfs)		0.347
RETURN PERIOD OF PEAK FLOW (yrs)		100
CARTRIDGE FLOW RATE (gpm)		11.25
MEDIA TYPE (PERLITE, ZPG, PSORB)		ZPG
RIM ELEVATION		298.11
PIPE DATA:	I.E.	DIAMETER
INLET STUB	295.06	12"
OUTLET STUB	295.06	12"

CONFIGURATION: OUTLET, INLET, OUTLET, INLET

SLOPED LID	YES\NO
SOLID COVER	YES\NO
NOTES/SPECIAL REQUIREMENTS:	



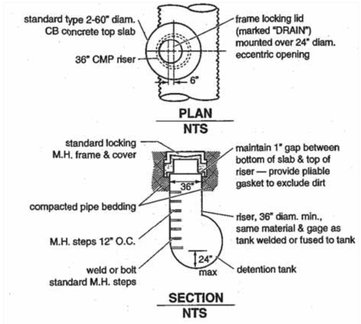
PLAN VIEW
NTS

SECTION A-A
NTS

NOTES:
1. ALL METAL PARTS CORROSION RESISTANT. STEEL PARTS GALVANIZED AND ASPHALT COATED (TREATMENT 1 OR BETTER).
2. PIPE ZONE BEDDING & BACKFILL PER WSDOT STANDARD PLAN B-55.20-02.

3 C21 DETENTION TANK

NOT TO SCALE
PER SWMMWW FIGURE 3.2.6

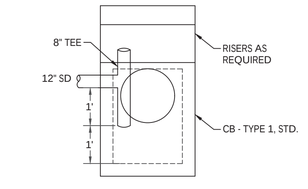


Notes:
1. Use adjusting blocks as required to bring frame to grade.
2. All materials to be aluminum or galvanized and asphalt coated (Treatment 1 or better).
3. Must be located for access by maintenance vehicles.
4. May substitute WSDOT special Type IV manhole (RCP only).

Figure 3.2.7 - Detention Tank Access Detail

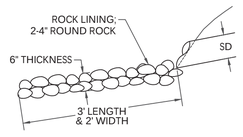
4 C21 TANK ACCESS RISER

NOT TO SCALE
PER SWMMWW FIGURE 3.2.7



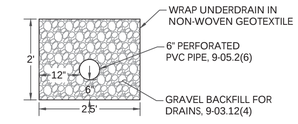
5 C21 CB - DEBRIS TEE

NOT TO SCALE



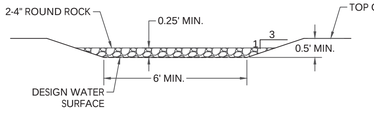
6 C21 ROCK PAD

NOT TO SCALE



7 C21 UNDERDRAIN

NOT TO SCALE



8 C21 OVERFLOW SPILLWAY

NOT TO SCALE

DRAINAGE DETAILS
WINDWARD ESTATES - 1912 SIDNEY AVENUE
PLAT UTILITY SUBMITTAL

KELSEY E. LAUGHLIN — STATE OF WASHINGTON — 18839 — REGISTERED PROFESSIONAL ENGINEER — 12/9/2022

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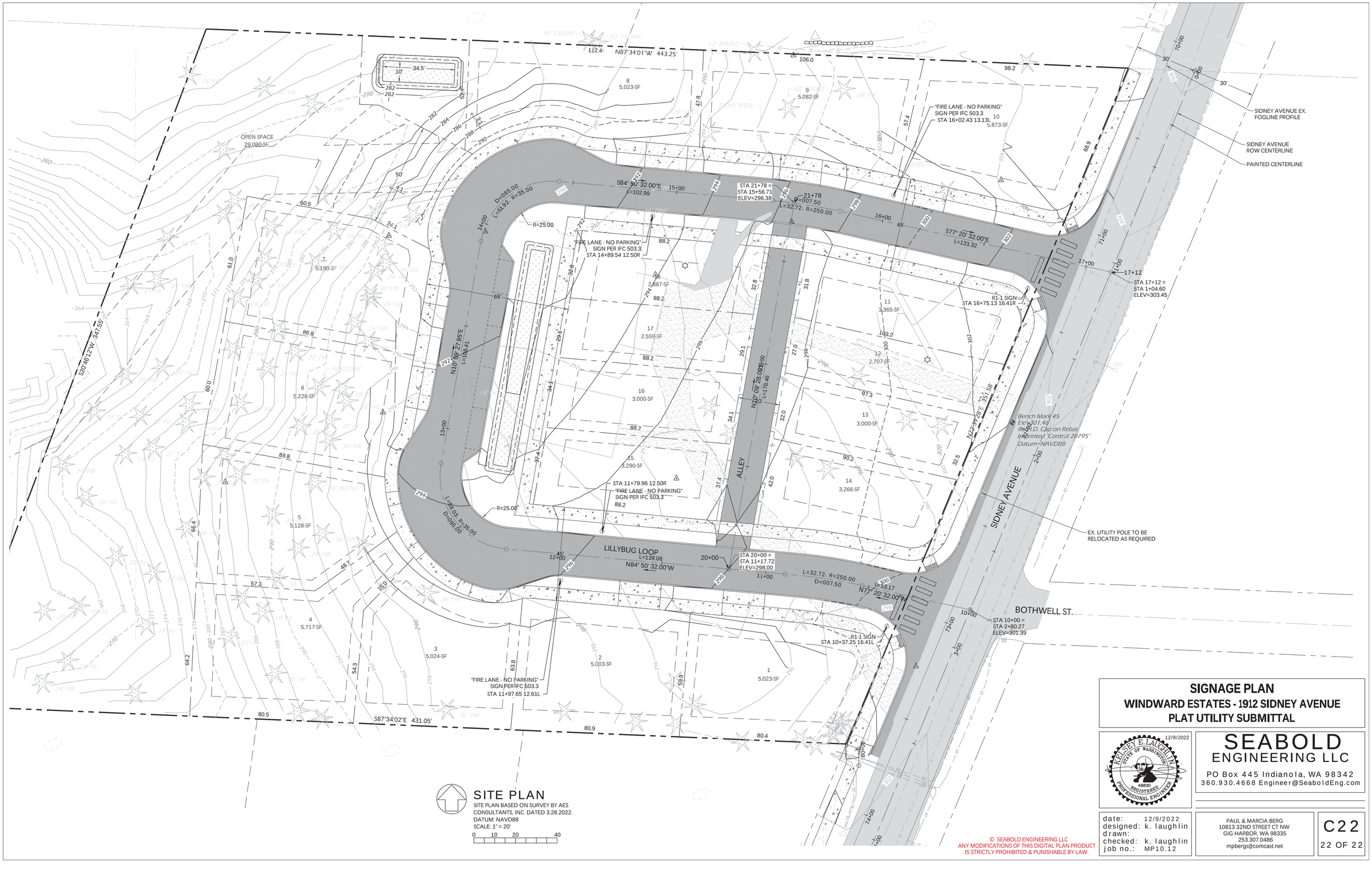

SITE PLAN

SITE PLAN BASED ON SURVEY BY AES CONSULTANTS, INC. DATED 3.28.2022.
DATUM: NAVD88
SCALE: 1" = 20'

0 10 20 40

SIGNAGE PLAN
WINDWARD ESTATES - 1912 SIDNEY AVENUE
PLAT UTILITY SUBMITTAL

KELSEY E. LAUGHLIN
STATE OF WASHINGTON
48830
REGISTERED
PROFESSIONAL ENGINEER
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