

INDIVIDUAL LOT DRAINAGE NOTE

INDIVIDUAL LOT STORMWATER BMP'S ADDRESSING RUNOFF FROM HARD SURFACES (ROOF, DRIVEWAY) AND YARD AREAS WILL BE SPECIFIED ON THE FINAL PLAT MAP OR IN THE INDIVIDUAL BUILDING PERMIT APPLICATIONS FOR EACH LOT. ROOF RUNOFF FROM LOTS 38-56 WILL BE TIGHTLINED TO THE INFILTRATION FACILITY LOCATED ON TRACT E.

GENERAL NOTES

- THE PROPOSED STORM DRAINAGE SYSTEM INCLUDING CONVEYANCE, TREATMENT, AND INFILTRATION SYSTEMS WILL MEET CITY OF OLYMPIA STANDARDS.
- THE PROPOSED STORM PIPE AND CATCH BASIN RIM AND INVERT ELEVATIONS SHOWN ARE APPROXIMATE AND WILL BE ADJUSTED DURING THE FINAL DESIGN PHASE OF THE PROJECT.

PROPOSED BEST MANAGEMENT PRACTICES (BMP'S)

THE FOLLOWING PERMANENT STORMWATER BEST MANAGEMENT PRACTICES (BMP'S) ARE PROPOSED FOR THIS PROJECT:

- T5.10A DOWNSPOUT INFILTRATION SYSTEMS (LOT ROOFS)
- T5.12 SHEET FLOW DISPERSION (LOT WALKWAYS/PATIOS)
- T5.13 POST-CONSTRUCTION SOIL QUALITY AND DEPTH (ALL DISTURBED, NEW LAWN/LANDSCAPE, AND STORMWATER DISPERSION AREAS)
- T5.14A RAIN GARDENS (LOT ROOFS)
- T5.15 PERMEABLE PAVEMENTS (PRIVATE ACCESS LANES, SIDEWALKS, AND INDIVIDUAL LOT DRIVEWAYS)
- T5.16 TREE RETENTION AND TREE PLANTING (SVPA TRACTS)
- T5.40 PRESERVING NATIVE VEGETATION (SVPA TRACTS)

CP&D Received 8/17/18

THE FOLLOWING TEMPORARY CONSTRUCTION BEST MANAGEMENT PRACTICES (BMP'S) ARE PROPOSED FOR THIS PROJECT:

- C101 PRESERVING NATURAL VEGETATION
- C105 STABILIZED CONSTRUCTION ENTRANCE/EXIT
- C120 TEMPORARY AND PERMANENT SEEDING
- C121 MULCHING
- C123 PLASTIC COVERING
- C125 TOPSOILING/COMPOSTING
- C130 SURFACE ROUGHENING
- C140 DUST CONTROL
- C150 MATERIALS ON HAND
- C151 CONCRETE HANDLING
- C152 SAWCUTTING AND SURFACING POLLUTION PREVENTION
- C160 CONTRACTOR EROSION AND SPILL CONTROL LEAD SCHEDULING
- C207 CHECK DAMS
- C209 OUTLET PROTECTION
- C220 STORM DRAIN INLET PROTECTION
- C233 SILT FENCE
- C235 WATTLES

*AN ALUMINUM BOX CULVERT MAY BE PROPOSED AT THE FINAL DESIGN STAGE IN LIEU OF THE THREE 24" CULVERTS.

NOTE:
SEE DETAILS ON SHEETS 4 & 5 FOR
REFERENCE

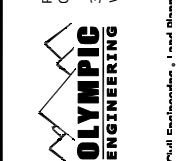
WELLINGTON HEIGHTS

PRELIMINARY EROSION CONTROL
AND DRAINAGE PLAN

DESIGNED BY: CMM
DRAWN BY: CMM
CHECKED BY:
SCALE: 1" = 40'
DATE: 3/29/18



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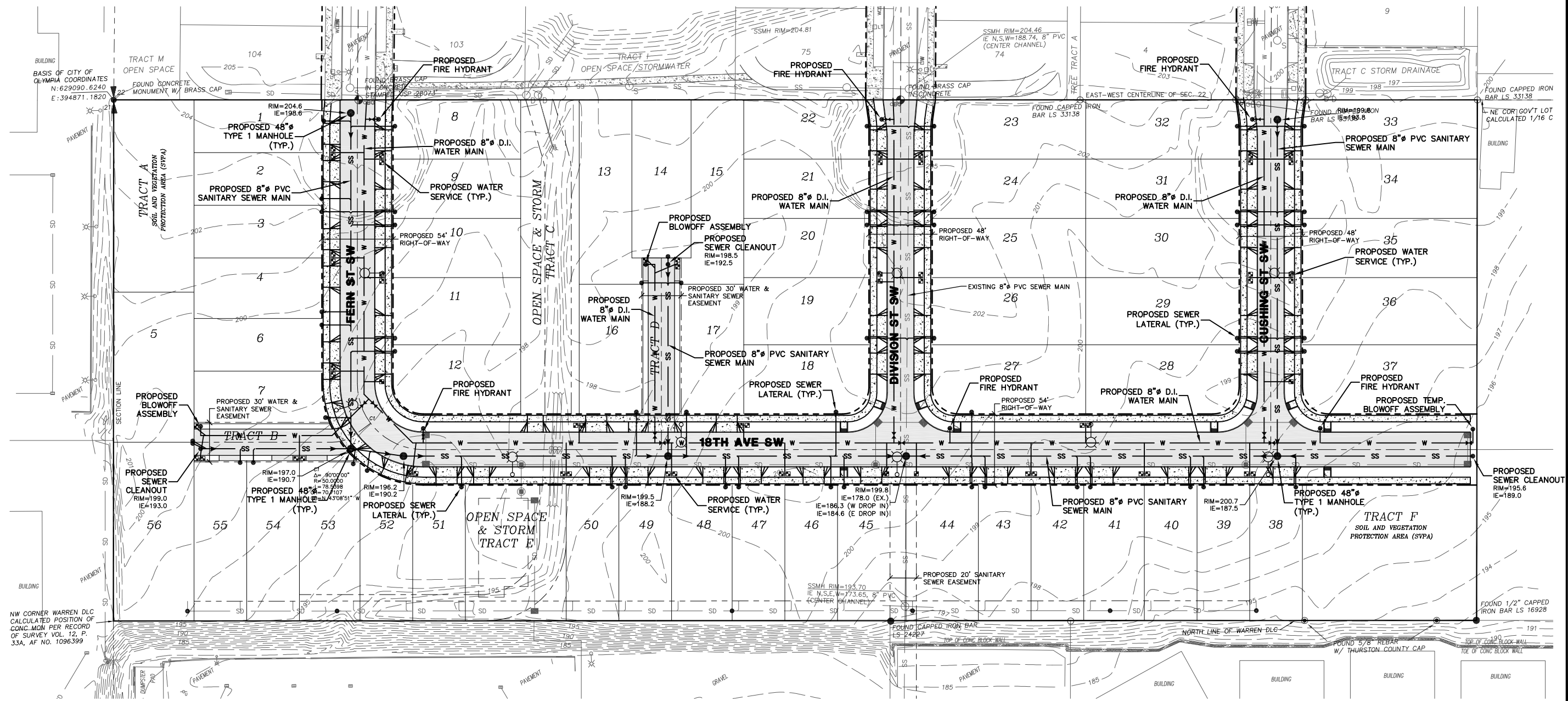


JOB NUMBER:
17096
DRAWING NAME:
17096_DRPL

SCALE: 1"=40 FEET
BASIS OF BEARINGS: N 65°47'00" E FROM THE FOUND MONUMENT AT THE WEST ONE-QUARTER CORNER TO THE FOUND MONUMENT AT THE INTERSECTION OF DIVISION AND 16TH.
MEAS=666.78 CITY=666.84

VERTICAL DATUM
NAVD 88
CITY OF OLYMPIA BM NO. 1534; BRASS DISC TOP OF CURB WEST SIDE OF DECATUR STREET ON EXTENSION OF 15TH AVENUE CENTERLINE
ELEVATION = 206.335' NAVD 88

- GENERAL NOTES**
- ALL WATER AND SANITARY SEWER MAINS, SERVICES, APPURTENANCES, ETC. WILL MEET CITY OF OLYMPIA STANDARDS INCLUDING MINIMUM VERTICAL AND HORIZONTAL SEPARATION REQUIREMENTS.
 - THE PROPOSED SANITARY SEWER RIM AND INVERT ELEVATIONS SHOWN ARE APPROXIMATE AND WILL BE ADJUSTED DURING THE FINAL DESIGN PHASE OF THE PROJECT.



NW CORNER WARREN DLC CALCULATED POSITION OF CONC. MON. PER RECORD OF SURVEY VOL. 12, P. 33A, AF NO. 1096399

REVISION		DATE	REVISIONS PER CITY 1ST REVIEW COMMENTS
NO.	1	7/23/18	

WELLINGTON HEIGHTS

PRELIMINARY WATER AND SANITARY SEWER PLAN

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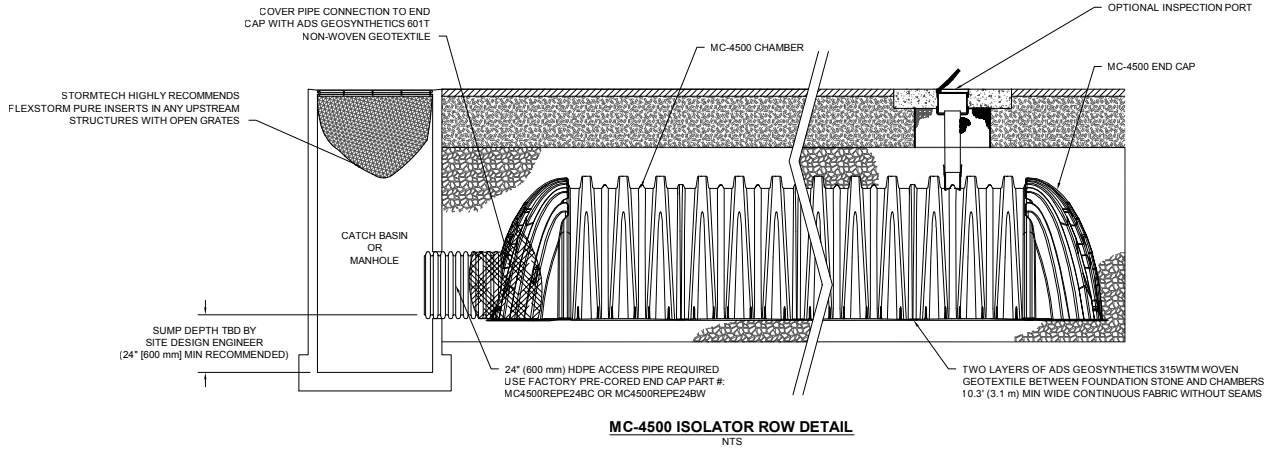
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JOB NUMBER: 17096
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SHEET: 3 OF 5

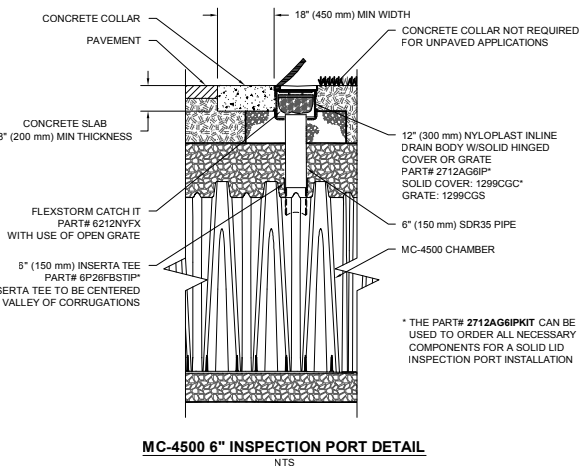


INSPECTION & MAINTENANCE

- STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
- INSPECTION PORTS (IF PRESENT)
 - REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
 - REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
 - USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
 - LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
 - IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
 - ALL ISOLATOR ROWS
 - REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
 - USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
 - MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
 - FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
 - IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
- A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
 - APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
 - VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.
- STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

- INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
- CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

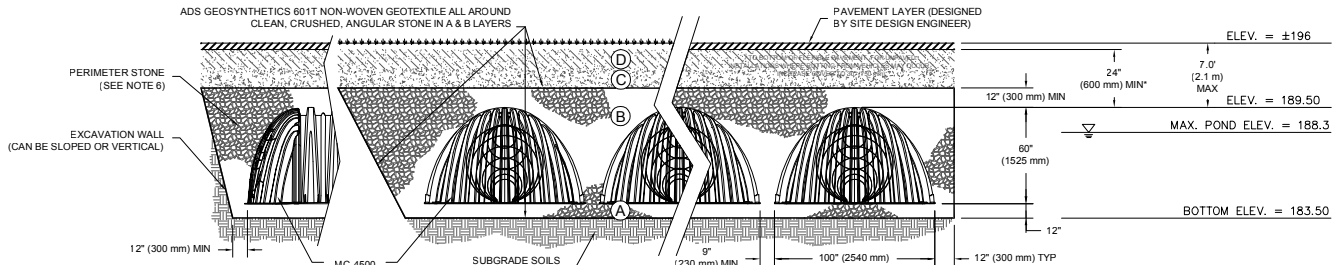


ACCEPTABLE FILL MATERIALS: STORMTECH MC-4500 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145* A-1, A-2-4, A-3 OR AASHTO M43* 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 76, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43* 3, 4	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43* 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.**

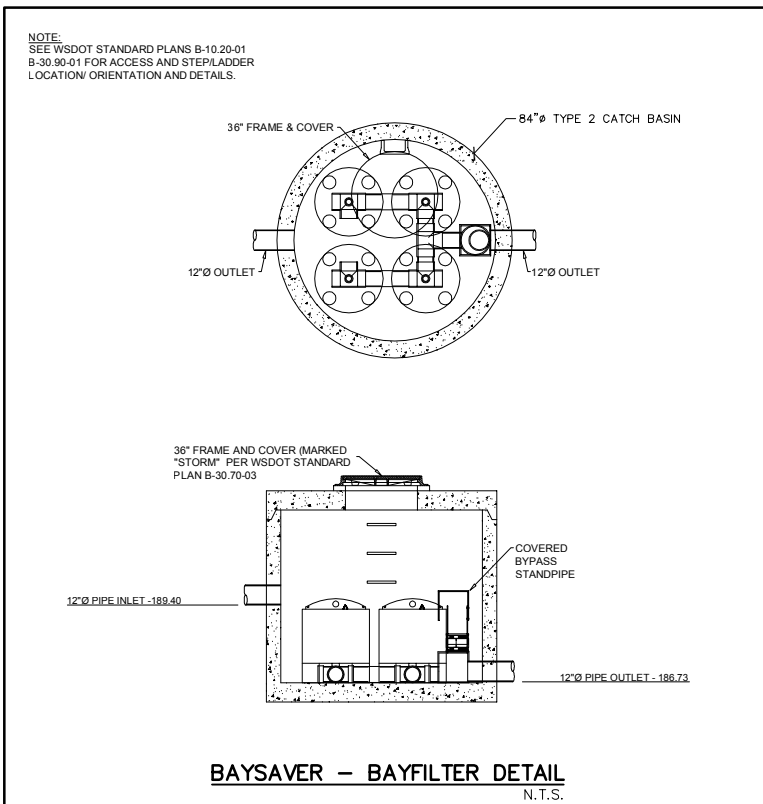
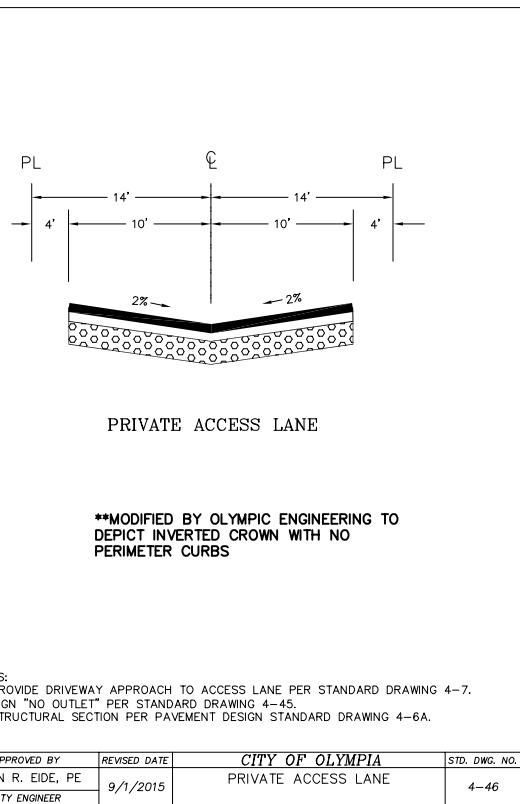
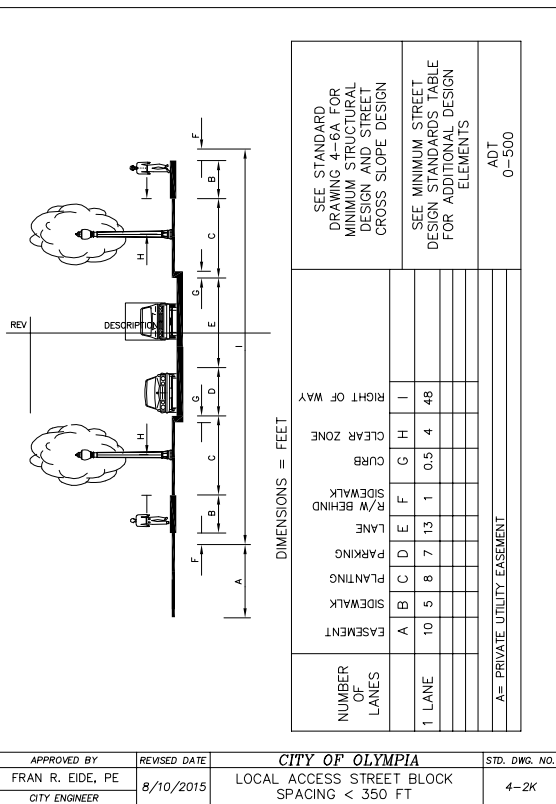
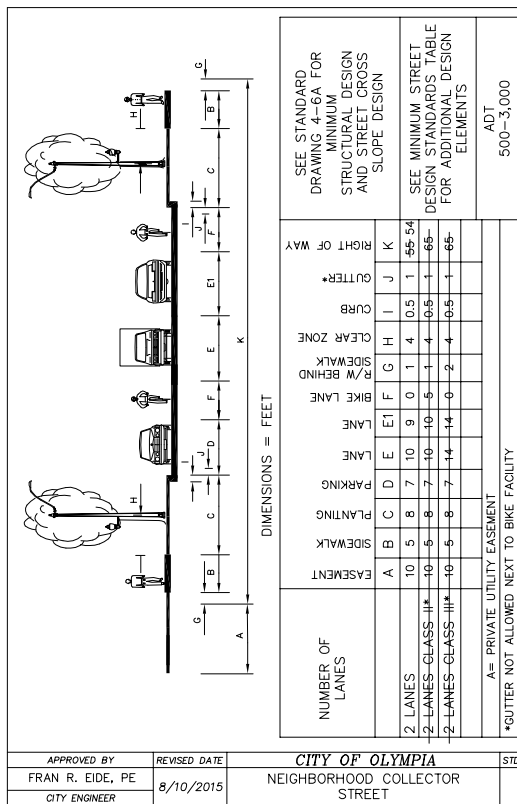
PLEASE NOTE:

- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
- STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
- WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.



NOTES:

- MC-4500 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- MC-4500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- ONCE LAYER 'C' IS PLACED, ANY SOIL MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

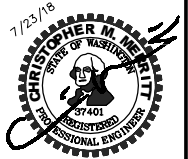


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WELLINGTON HEIGHTS

PRELIMINARY DETAILS

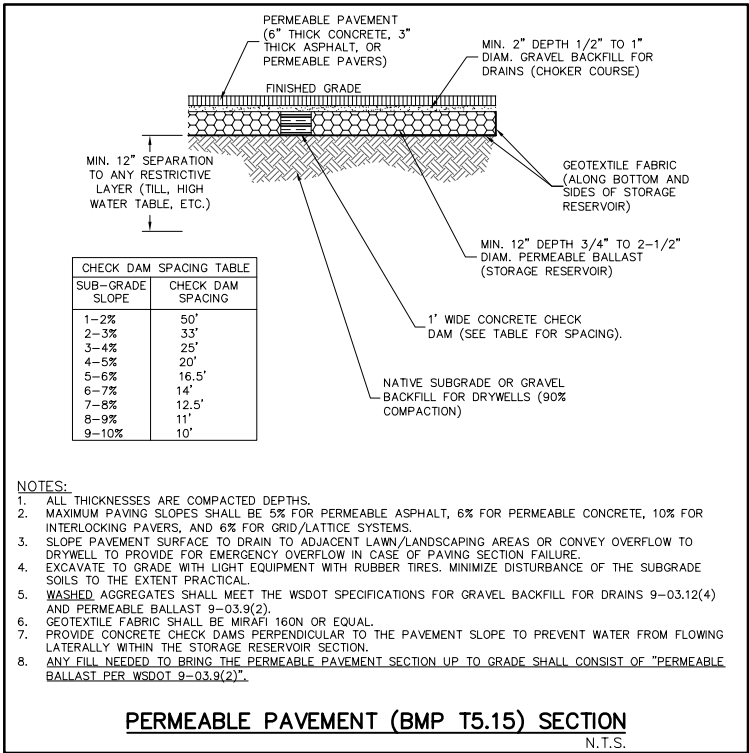
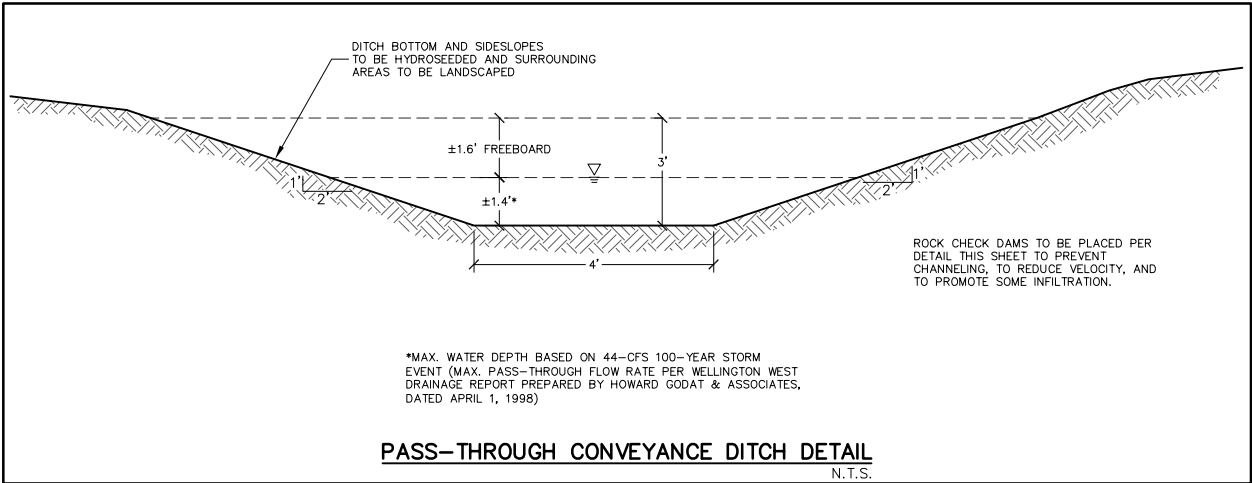
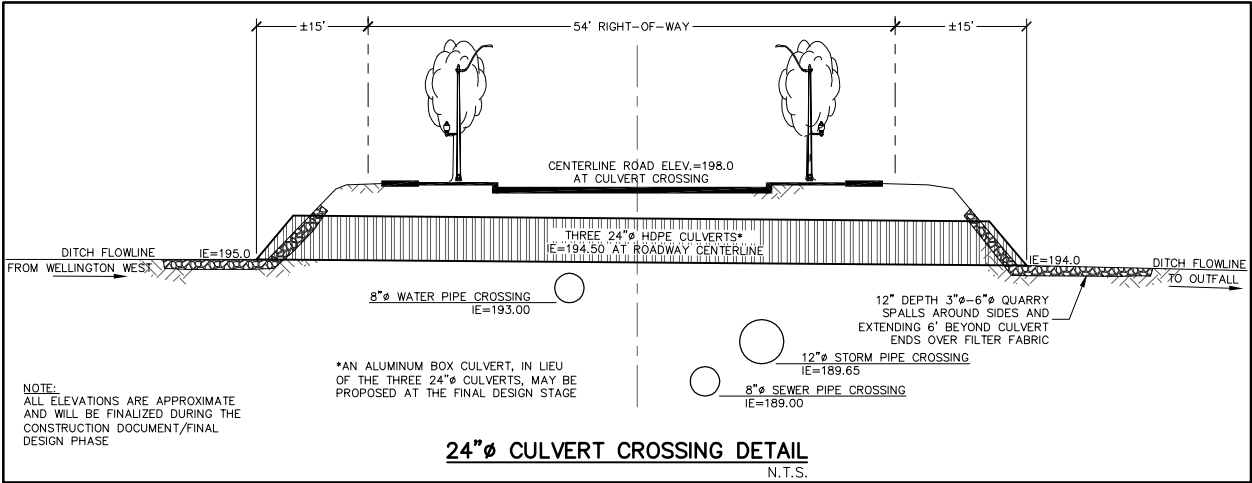
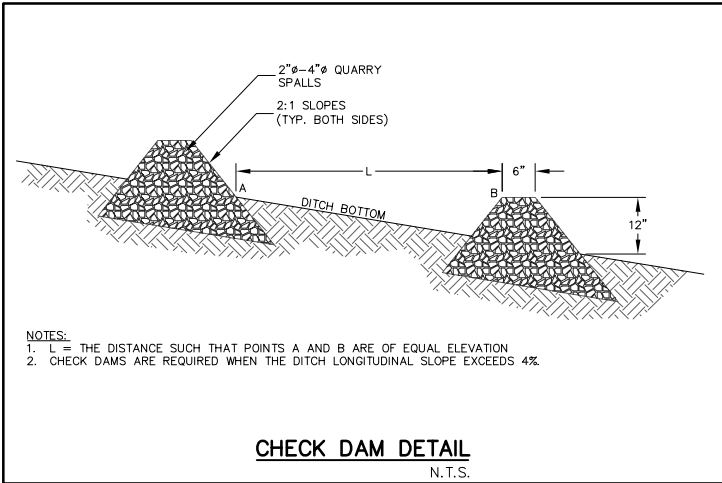
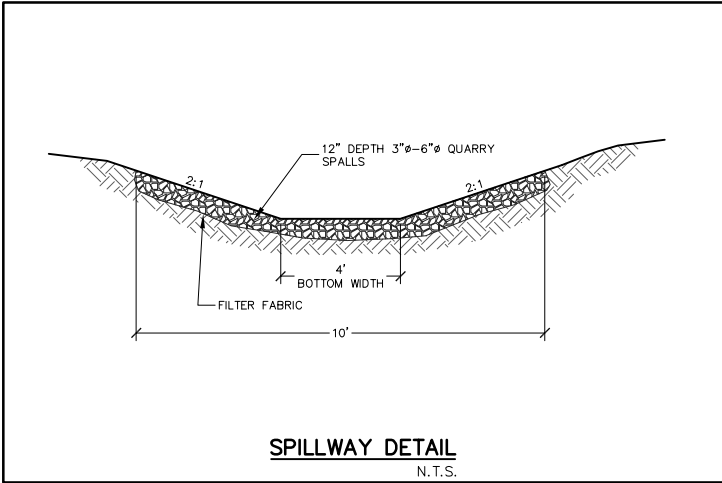
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7/23/18

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WELLINGTON HEIGHTS

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