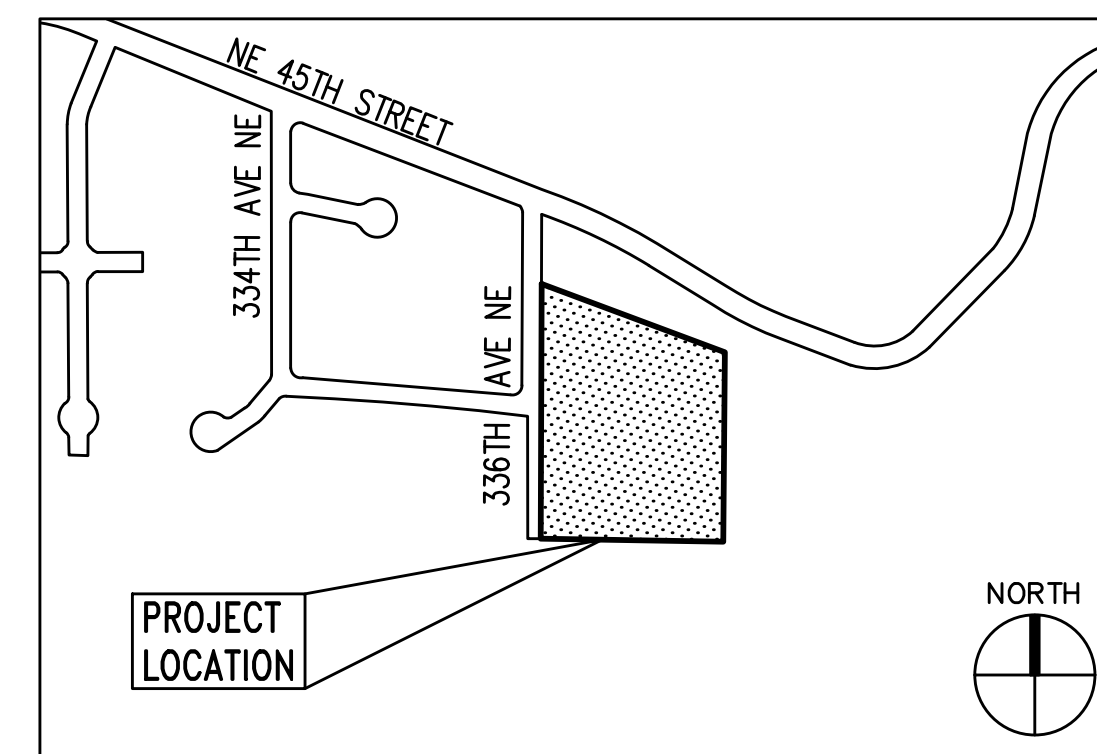


TOLT PLACE

CARNATION, WASHINGTON

City of Carnation accepted 6/21/23



VICINITY MAP
NTS

CITY OF CARNATION:
CARNATION CITY HALL
4621 TOLT AVENUE
CARNATION, WA 98014

CARNATION CITY INSPECTIONS
425-333-4192

PROJECT TEAM:

APPLICANT:
JOHN DAY HOMES, INC
PO BOX 2930
NORTH BEND, WA 98045
PHONE: (425) 831-4901
CONTACT: JOHN DAY

SURVEYOR:
KPFF CONSULTING ENGINEERS
4200 6TH AVENUE SE, SUITE 309
LACEY, WA 98503
PHONE: (360) 292-4943
CONTACT: JEROME CHAPMAN

WETLAND CONSULTANT:
SEWALL WETLAND CONSULTING
27641 COVINGTON WAY SE #2
COVINGTON, WA 98042
PHONE: (253) 859-0515
CONTACT: ED SEWALL

GEOTECHNICAL ENGINEER:
SOUTH FORK GEOSCIENCES
PO BOX 1275
NORTH BEND, WA 98045
PHONE: (425) 890-4858
CONTACT: ANDREW GLANDON

LANDSCAPE ARCHITECT:
LANE & ASSOCIATES
13802 26TH AVENUE NW
TULALIP, WA 98271
PHONE: (425) 885-2319
CONTACT: BRUCE LANE

CIVIL ENGINEER:
KPFF CONSULTING ENGINEERS
1601 FIFTH AVENUE, SUITE 1600
SEATTLE, WA 98101
PHONE: (206) 926-0599
CONTACT: TOM JONES, PM

ARBORIST:
LAYTON TREE CONSULTING
PO BOX 572
SNOHOMISH, WA 98291
PHONE: (425) 220-5711
CONTACT: BOB LAYTON

SURVEY NOTES:

(PER SURVEY DATED 01/21/2021 BY KPFF CONSULTING ENGINEERS)

BASIS OF MERIDIAN

WASHINGTON STATE PLANE COORDINATE SYSTEM, NAD 83/91, NORTH ZONE 4601

VERTICAL DATUM

NAVD 88, CONTRACTOR TO VERIFY VERTICAL DATUM TO SITE TOPOGRAPHIC FEATURES PRIOR TO CONSTRUCTION.

BOUNDARY NOTE

NO CORNERS WERE SET BY THIS SURVEY, NO TITLE REPORT WAS OBTAINED AND NO EASEMENTS ON THE PROPERTY, IF ANY, ARE SHOWN. BOUNDARY LINES ARE SHOWN PER BEST AVAILABLE RECORD INFORMATION, AND TIES TO EXISTING LOCAL MONUMENTATION.

UTILITY NOTE

UNDERGROUND UTILITIES SHOWN HEREON ARE PER AS-BUILT OF SURFACE FEATURES AND UNDERGROUND UTILITY LOCATES PERFORMED BY KPFF INC. ALL UTILITIES SHOWN HEREON SHOULD BE CONSIDERED APPROXIMATE ONLY AND VERIFIED PRIOR TO ANY EXCAVATION TAKING PLACE. THIS SURVEY DOES NOT PURPORT TO SHOW ALL UNDERGROUND UTILITIES, UTILITIES MAY EXIST WITHIN THE SURVEY LIMITS THAT CANNOT BE LOCATED DUE TO INADEQUATE SURFACE EVIDENCE OR THEIR NON CONDUCTIBLE NATURE.

VACUUM MAIN SEWER SHOWN HEREON IS APPROXIMATE ONLY BASED ON ASPHALT PATCHES IN ROADWAY AND MANHOLES LOCATED WITHIN THE SURVEY LIMITS.

METHOD OF SURVEY

CONTROL SURVEY PERFORMED WITH THE USE OF TOPCON GR-5 GPS RECEIVERS USING RTK METHODS. SITE CONTROL AND TOPOGRAPHIC MAPPING PERFORMED USING CONVENTIONAL GROUND METHODS WITH THE USE OF TOPCON PS-103 ROBOTIC TOTAL STATION. ALL WORK PERFORMED DURING THE COURSE OF THIS SURVEY MEETS OR EXCEEDS THE STANDARDS AS SET FORTH IN WAC 332-130-099.

SURVEY WORK PERFORMED IN JANUARY OF 2021.

SURVEY CONTROL POINTS				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	237387.842	1380410.531	131.92	MAGANAIL
2	237683.528	1379832.042	126.94	MAGANAIL
3	237270.895	1379819.082	126.66	MAGANAIL
4	237004.580	1379836.219	124.69	MAGANAIL

LEGAL DESCRIPTION

THE LAND REFERRED TO IS SITUATED IN THE CITY OF CARNATION AND THE COUNTY OF KING, STATE OF WASHINGTON, AND IS DESCRIBED AS FOLLOWS:

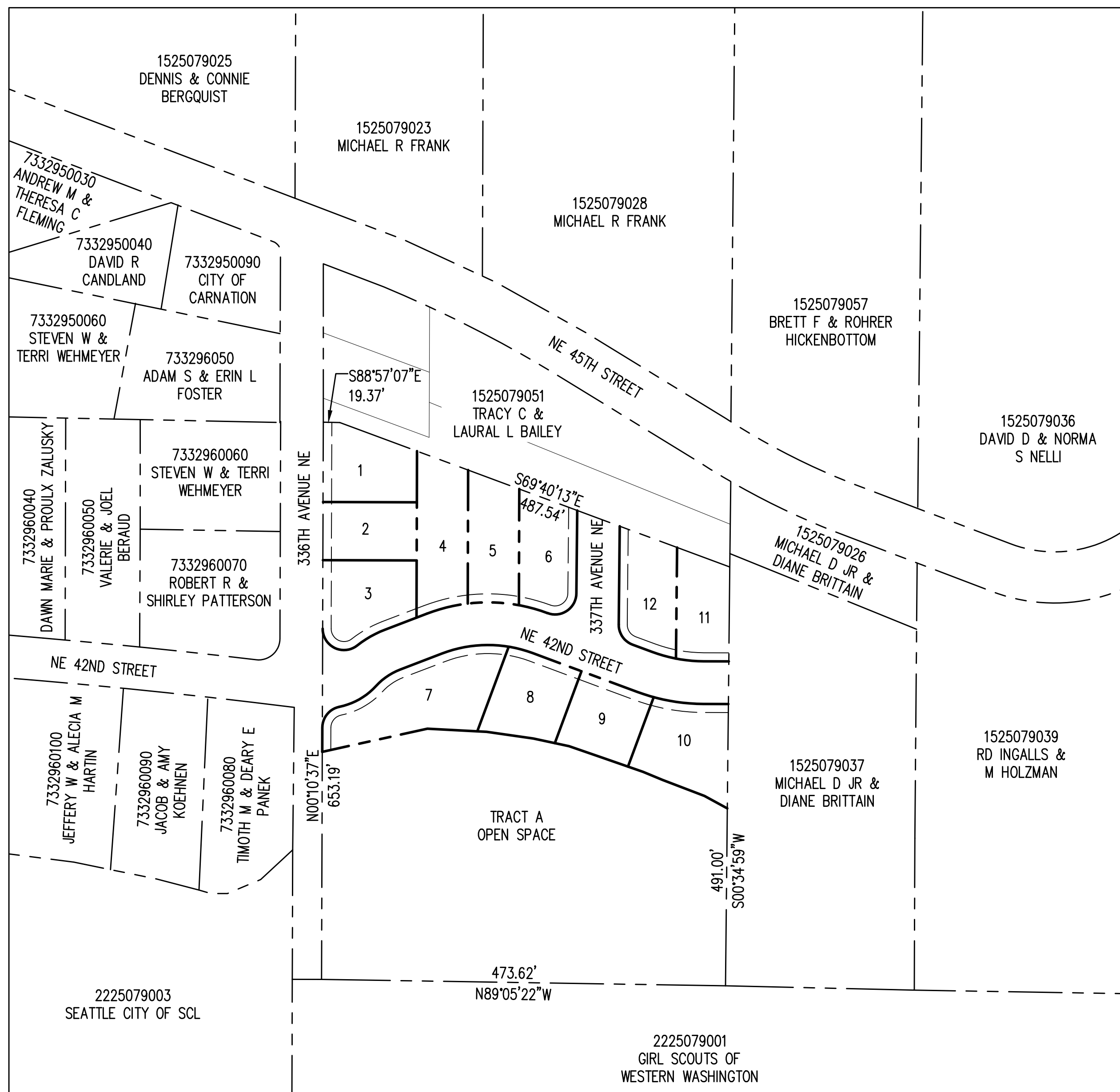
THAT PORTION OF GOVERNMENT LOT 1, SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M., KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE SOUTH LINE OF SAID SECTION, 825 FEET WEST OF THE SOUTHEAST CORNER THEREOF; THENCE NORTH 491 FEET; THENCE NORTHWESTERLY 491 FEET, MORE OR LESS, TO A POINT 660 FEET NORTH OF THE SOUTH LINE OF SAID SUBDIVISION AND 33 FEET EAST OF THE WEST LINE THEREOF; THENCE SOUTH 660 FEET TO THE SOUTH LINE OF SAID SECTION; THENCE EAST 462, MORE OR LESS, TO THE POINT OF BEGINNING.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

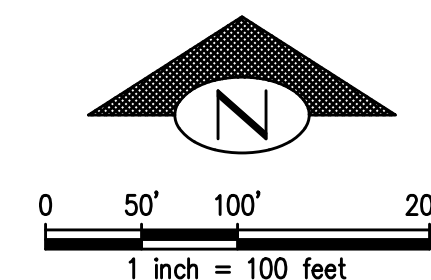
ABBREVIATED LEGAL

PORTION OF GOVERNMENT LOT 1, SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.



UTILITY PROVIDERS:

WATER: CITY OF CARNATION
SEWER: CITY OF CARNATION
POWER: PUGET SOUND ENERGY
TELEPHONE: CENTURYLINK
CABLE: COMCAST
GAS: PUGET SOUND ENERGY
FIRE DISTRICT: EAST SIDE FIRE AND RESCUE



SHEET INDEX	
SHEET NO.	SHEET TITLE
C0.00	COVER SHEET
C0.01	GENERAL NOTES
C0.02	GENERAL NOTES
C0.03	GENERAL NOTES
C0.04	GENERAL NOTES & CIVIL ABBREVIATIONS
C0.05	GENERAL NOTES
C1.00	CONSTRUCTION BASELINE PLAN
C2.00	TEMPORARY EROSION & SEDIMENT CONTROL (TESC) PLAN
C2.10	TEMPORARY EROSION & SEDIMENT CONTROL (TESC) DETAILS
C2.11	TEMPORARY EROSION & SEDIMENT CONTROL (TESC) DETAILS
C3.00	DEMOLITION PLAN
C4.00	COMPOSITE UTILITY PLAN
C5.00	LOT GRADING AND DRAINAGE PLAN
C5.01	LOT GRADING AND DRAINAGE PLAN
C5.10	LOT GRADING SECTIONS
C6.00	NE 42ND STREET GRADING & DRAINAGE PLAN AND PROFILE
C6.01	NE 42ND STREET GRADING & DRAINAGE PLAN AND PROFILE
C6.02	337TH AVENUE NE GRADING & DRAINAGE PLAN AND PROFILE
C6.03	336TH AVENUE NE GRADING & DRAINAGE PLAN AND PROFILE
C6.10	ROADWAY SECTIONS
C6.11	ROADWAY DETAILS
C6.12	ROADWAY DETAILS
C6.13	GRADING & DRAINAGE DETAILS
C6.14	WATER QUALITY DETAILS
C7.00	NE 42ND STREET WATER PLAN AND PROFILE
C7.01	NE 42ND STREET WATER PLAN AND PROFILE
C7.02	337TH AVENUE NE WATER PLAN AND PROLE
C7.03	336TH AVENUE NE WATER PLAN AND PROFILE
C7.10	WATER DETAILS
C7.20	WATER DETAILS
C8.00	NE 42ND STREET SEWER PLAN AND PROFILE
C8.01	NE 42ND STREET SEWER PLAN AND PROFILE
C8.02	337TH AVENUE NE SEWER PLAN AND PROFILE
C8.03	336TH AVENUE NE SEWER PLAN AND PROFILE
C8.10	SEWER DETAILS
C8.20	SEWER DETAILS
C9.00	CHANNELIZATION AND SIGNAGE PLAN
C9.10	CHANNELIZATION AND SIGNAGE DETAILS

C:\Temp\MapPublish_107561\CD 02.00 CR6.dwg

RossG

Jun 06, 2023 - 9:20am

NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD	DESIGNED BY WTJ
CHECKED BY WTJ	APPROVED BY JSF
DATE 12/22/2022	
J O B No. :2000639	

CALL TWO BUSINESS DAYS BEFORE YOU DIG
1-800-424-5555

SCALE:
AS NOTED

1601 5th Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
www.kpff.com

TOLT PLACE
CARNATION, WASHINGTON

COVER SHEET

SHEET
C0.00

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.

CITY OF CARNATION GENERAL NOTES

- NO WORK REQUIRING CITY OF CARNATION APPROVAL AND/OR PERMITS, OR REQUIRING APPROVALS AND/OR PERMITS ISSUED BY OTHER GOVERNING AGENCIES, SHALL BE PERFORMED UNTIL SUCH APPROVALS/PERMITS HAVE BEEN ISSUED. COPIES OF ALL SUCH APPROVALS AND/OR PERMITS SHALL BE MAINTAINED ON SITE AT ALL TIMES WORK IS IN PROGRESS.
- NO WORK OR SITE MOBILIZATION SHALL OCCUR UNTIL AFTER A PRE-CONSTRUCTION MEETING BETWEEN THE CITY AND THE PROPERTY OWNER, GEOTECHNICAL ENGINEER, GENERAL CONTRACTOR, AND EARTHWORK CONTRACTOR.
- UNDERGROUND UTILITIES MAY BE SHOWN GRAPHICALLY IN THESE STANDARDS OR OTHER DOCUMENTS PROVIDED BY THE CITY. ANY REPRESENTATION OF UNDERGROUND UTILITIES IS FOR GENERAL INFORMATIONAL PURPOSES ONLY. THE OWNER OR THEIR AGENTS MAY NOT RELY UPON ANY REPRESENTATIVES OF THE LOCATION OR ABSENCE OF UNDERGROUND UTILITIES IN DOCUMENTS PROVIDED BY THE CITY.
- THE OWNER AND CONTRACTOR MUST BE AWARE THAT EXCAVATING OR DIGGING FOR ANY REASON ON ANY PUBLIC PROPERTIES, PUBLIC RIGHTS-OF-WAY, OR PRIVATE PROPERTIES REQUIRES NOTIFICATION OF THE UTILITIES UNDERGROUND LOCATION CENTER AT 1-800-424-5555 OR 811 ON LOCAL PHONE NO LESS THAN 48 HOURS AND TWO BUSINESS DAYS PRIOR TO EXCAVATION.
- THE OWNER AND THEIR CONTRACTOR ARE ADVISED OF THE POSSIBILITY OF ENCOUNTERING BURIED ARTIFACTS OR OTHER CULTURAL RESOURCES DURING THE CONSTRUCTION OF ANY IMPROVEMENTS THAT REQUIRE EXCAVATION. IT IS RECOMMENDED THAT THE CONTRACTOR PREPARE A FORMAL INADVERTENT DISCOVERY PLAN (IDP) PRIOR TO INITIATING EXCAVATION ACTIVITIES. IN THE EVENT AN ARTIFACT OR OTHER POSSIBLE CULTURAL RESOURCE IS DISCOVERED DURING CONSTRUCTION, THE OWNER IS ADVISED TO CONTACT CITY HALL IMMEDIATELY. THE CITY WILL REFER THE OWNER TO THE APPROPRIATE GOVERNMENT AGENCY FOR ADDITIONAL INSTRUCTIONS.
- THE CONTRACTOR AT ALL TIMES SHALL COMPLY WITH ALL FEDERAL AND STATE LAWS, LOCAL LAWS AND ORDINANCES, AND ANY REGULATIONS WHICH IN ANY MANNER AFFECT THE PROJECT. FAILURE TO COMPLY WITH THE LAWS AND CITY STANDARDS AND PERMIT CONDITIONS MAY RESULT IN DENIAL OF PLAN OR DEVELOPMENT PERMIT APPROVAL, REVOCATION OF PRIOR APPROVALS, LEGAL ACTION FOR FORFEITURE OF BOND, CODE ENFORCEMENT, AND/OR OTHER PENALTIES AS PROVIDED BY LAW.
- THE CONTRACTOR SHALL RELEASE, INDEMNIFY AND PROMISE TO DEFEND AND SAVE HARMLESS THE CITY, ITS OFFICER, EMPLOYEES AND AGENTS FROM AND AGAINST ANY AND ALL LIABILITY, LOSS, DAMAGE, EXPENSE, ACTIONS AND CLAIMS, INCLUDING COST AND REASONABLE ATTORNEYS FEES INCURRED BY THE CITY IN DEFENSE THEREOF, ASSERTING OR ARISING DIRECTLY OR INDIRECTLY ON REGULATIONS WHETHER SUCH VIOLATIONS ARE BY THE CONTRACTOR, HIS/HER SUBCONTRACTORS, EMPLOYEES, OR AGENTS.
- THE CONTRACTOR SHALL PROTECT AND PRESERVE FROM DAMAGE, INTERFERENCE AND DESTRUCTION ALL PRIVATE AND PUBLIC PROPERTY ON OR IN THE VICINITY OF THE WORK. IF SUCH PROPERTY IS DAMAGED OR DESTROYED OR ITS USE INTERFERED WITH BY THE CONTRACTOR OR HIS AGENTS, IT SHALL BE RESTORED IMMEDIATELY TO ITS FORMER CONDITION BY THE CONTRACTOR AT HIS EXPENSE AND SUCH INTERFERENCE TERMINATED.
- WHENEVER CONSTRUCTION WORK UNDER THIS POLICY IS UNDERTAKEN ON EASEMENT, RIGHT-OF-WAY OR FRANCHISE, IT SHALL BE ACCOMPLISHED IN SUCH MANNER AS TO MINIMIZE DISTURBANCE AND DAMAGE.
- THE CONTRACTOR SHALL NOT REMOVE, EVEN TEMPORARILY, ANY TREES OR SHRUBS WHICH EXIST ON EASEMENTS OR PARKING STRIPS ACROSS OTHER'S PRIVATE OR PUBLIC PROPERTY WITHOUT FIRST OBTAINING APPROVAL FROM THE AFFECTED PROPERTY OWNER AND THE CITY.
- THE CONTRACTOR SHALL RESTORE ALL EASEMENTS AND RIGHTS-OF-WAY TO A CONDITION EQUAL TO THEIR ORIGINAL CONDITION BEFORE ENTRY, OR TO A CONDITION SATISFACTORY TO THE PROPERTY OWNER, AND/OR OTHER AUTHORITY, AND THE CITY.
- THE CONTRACTOR SHALL PROTECT FROM DAMAGE PRIVATE AND PUBLIC UTILITIES, INCLUDING TELEPHONE LINES, GAS LINES, POWER LINES, STORM DRAINS, SEWER AND WATER LINES, AND APPURTENANCES, HIGHWAY LIGHTING AND SIGNAL SYSTEMS, AND SIMILAR FACILITIES.

- THE OWNER IS RESPONSIBLE FOR ALL DAMAGES TO STREETS, ROADS, HIGHWAYS, DITCHES, WALLS, CULVERTS, UTILITIES, BARRICADES, LIGHTS, OR ANY OTHER PROPERTY CAUSED BY THE OWNER OR OWNER'S CONTRACTOR'S WORK, WHETHER SUCH DAMAGE BE AT THE SITE OF THE WORK OR CAUSED BY TRANSPORTING OR HAULING TO OR FROM THE WORK, AND SHALL REPAIR OR REPLACE, OR ARRANGE FOR THE REPAIR OF ALL SUCH DAMAGES TO THE SATISFACTION OF THE CITY AND OF ANY OTHER AUTHORITY OR PERSON HAVING OWNERSHIP OR JURISDICTION OVER THE PLACE OF WORK AND/OR DAMAGE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR INTERIM TRAFFIC CONTROL DURING CONSTRUCTION ON OR ALONG TRAVELED ROADWAYS. TRAFFIC CONTROL SHALL FOLLOW THE GUIDELINES OF THE WSDOT STANDARD SPECIFICATIONS. ALL BARRICADES, SIGNS AND FLAGGING SHALL CONFORM TO THE REQUIREMENTS OF THE MUTCD MANUAL. SIGNS MUST BE LEGIBLE AND VISIBLE AND SHOULD BE REMOVED AT THE END OF EACH WORK DAY IF NOT APPLICABLE AFTER CONSTRUCTION HOURS.
- WHEN ROAD CLOSURES CANNOT BE AVOIDED THE CONTRACTOR SHALL POST "TO BE CLOSED" SIGNS PRIOR TO THE CLOSING THE ROAD. THE TYPES AND LOCATION OF THE SIGNS SHALL BE SHOWN ON A DETOUR PLAN. A DETOUR PLAN MUST BE PREPARED AND SUBMITTED TO THE CITY AND APPROVED PRIOR TO CLOSING ANY CITY STREET. IN ADDITION, THE OWNER/CONTRACTOR MUST NOTIFY, IN WRITING, LOCAL FIRE, SCHOOL, LAW ENFORCEMENT AUTHORITIES, ALL TRANSIT, POST OFFICE AND ANY OTHER AFFECTED PERSONS AS DIRECTED BY THE CITY AT LEAST FIVE DAYS PRIOR TO CLOSING UNLESS THE ROAD CLOSURE IS OF AN EMERGENCY NATURE.
- NOISE FROM CONSTRUCTION ACTIVITIES SHALL NOT BE HEARD ACROSS PROPERTY LINES, OR PUBLIC RIGHTS-OF-WAY BOUNDARIES, EXCEPT DURING THE PERIODS 7:00 AM TO 7:00 PM MONDAYS THROUGH FRIDAYS OR 9:00 AM THROUGH 6:00 PM ON WEEKENDS AND HOLIDAYS.
- TRUCKS TRAVELLING TO AND FROM THE WORK SITE SHALL DO SO BY THE MOST DIRECT ROUTE FROM THE SITE AND TOLT AVENUE (SR 203). TRUCKS SHALL NOT USE SIDE STREETS TO PARK, STAGE OR TRAVEL.
- STREET AND SIDEWALK SURFACES SHALL BE CONTINUOUSLY MAINTAINED FREE OF DIRT, DUST, OR MUD. CONTRACTOR SHALL MECHANICALLY SWEEP STREET SURFACES DAILY, OR MORE FREQUENTLY AS REQUIRED, DURING PERIODS OF TRUCKING OPERATIONS OR AS OTHERWISE REQUIRED TO MAINTAIN CLEAN STREET SURFACES. STREET SURFACES SHALL NOT BE WASHED INTO DRAINAGE STRUCTURES OR STORM WATER DITCHES.
- SANITARY FACILITIES, INCLUDING PORTABLE TOILET FACILITIES, FOR USE BY CONTRACTOR PERSONNEL, MATERIAL SUPPLIERS, AND GOVERNING AGENCY INSPECTORS SHALL BE FURNISHED BY THE CONTRACTOR AND REGULARLY MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITIES.
- OWNER OR CONTRACTOR SHALL POST AND MAINTAIN SIGNAGE IDENTIFYING OWNER AND CONTRACTOR POINTS OF CONTACT INFORMATION FOR KEY PERSONNEL. SIGN SHALL BE NEAR THE ROW BOUNDARY AND CLEARLY VISIBLE. POINT OF CONTACT INFORMATION SHALL INCLUDE NAMES AND PHONE NUMBERS OF PERSONS IN AUTHORITY. AT LEAST ONE PHONE NUMBER POSTED SHALL OPERATE 24 HOURS/DAY AND 7 DAYS A WEEK.
- PROTECT EXISTING SURVEY MONUMENTS, INCLUDING PROPERTY CORNERS, FROM DISTURBANCE OR DAMAGE BY CONSTRUCTION ACTIVITIES. ALL EXISTING SURVEY MONUMENTS, INCLUDING PROPERTY CORNERS, SHALL BE PERPETUATED BY LICENSED SURVEYOR IN ACCORDANCE WITH WAC 332-120 AND REQUIRED MONUMENT DESTRUCTION REPORTS FILED WITH THE DEPARTMENT OF NATURAL RESOURCES.
- CONTRACTOR SHALL MAINTAIN, ON A DAILY BASIS, RECORD DRAWINGS SHOWING ALL DEVIATIONS FROM THE APPROVED PERMIT DRAWINGS. PRIOR TO FINAL APPROVAL, THE DEVELOPER SHALL SUBMIT AUTOCAD RECORD DRAWINGS, TO THE CITY ENGINEER, IN A FORMAT ACCEPTABLE TO THE CITY.

CITY OF CARNATION GENERAL RIGHT-OF-WAY CONSTRUCTION NOTES

- PUBLIC RIGHTS OF WAY CONSTRUCTION STANDARDS:
- ALL WORK IN PUBLIC RIGHTS-OF-WAY (ROW) AND ROW DEDICATION AREAS SHALL COMPLY WITH THE 2016 WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION (WSDOT STD SPECS), EXCEPT AS MODIFIED BY THE CITY OF CARNATION STREET AND STORM SEWER SYSTEM STANDARDS, THE CONDITIONS ANNOTATED ON THE APPROVED PERMIT DRAWINGS, AND THE FOLLOWING CONDITIONS. CONFLICTING STANDARDS SHALL BE RESOLVED BY THE CITY ENGINEER.
- COORDINATION WITH CITY:
CITY ENGINEER REPRESENTATIVE: JORGE GARCIA, P.E. HNTB CORP. 206-200-3417; EMAIL: JORGE.GARCIA@HNTB.COM
- CITY ENGINEER REPRESENTATIVE MUST OBSERVE AND ACCEPT ALL WORK IN ROW, EXCEPT WATER AND SEWER INSTALLATIONS. COORDINATE WATER AND SEWER INSTALLATION OBSERVATION WITH THE PUBLIC WORKS SUPERINTENDENT.
 - SCHEDULE FOR WORK IN ROW SHALL BE UPDATED WEEKLY BY CONTRACTOR AND A COPY PROVIDED TO CITY ENGINEER REPRESENTATIVE ON A WEEKLY BASIS. CONTRACTOR SHALL COORDINATE CLOSELY WITH CITY ENGINEER REPRESENTATIVE TO KEEP CITY ENGINEER REPRESENTATIVE APPRISED OF WORK PROGRESS/STATUS.
 - CONTRACTOR SHALL NOT BURY PIPE OR STRUCTURES IN ROW UNTIL OBSERVED BY CITY ENGINEER REPRESENTATIVE OR PUBLIC WORKS REPRESENTATIVE. CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING AND SCHEDULING SITE OBSERVATION BY CITY REPRESENTATIVE.
 - UNLESS OTHERWISE DIRECTED, CONTRACTOR SHALL COORDINATE DIRECTLY WITH CITY ENGINEER REPRESENTATIVE FOR CONSTRUCTION OBSERVATION OF ALL WORK WITHIN THE ROW, EXCEPT WATER AND SEWER.
- TEMPORARY TRAFFIC CONTROL:
- CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SELECTING AND IMPLEMENTING PROPER TEMPORARY TRAFFIC CONTROL MEASURES IN ACCORDANCE WITH APPLICABLE REGULATIONS AND INDUSTRY STANDARD PRACTICES.
 - TEMPORARY TRAFFIC CONTROL SHALL BE PROVIDED AT ANY TIME WORK IN ROW MAY INTERFERE WITH NORMAL AND SAFE FLOW OF VEHICULAR AND PEDESTRIAN TRAFFIC. ALL FLAGGERS SHALL HOLD CURRENT CERTIFICATION BY STATE OF WASHINGTON. A MINIMUM OF ONE LANE OF TRAFFIC SHALL BE MAINTAINED ON ALL STREETS AT ALL TIMES, EXCEPT WHEN CITY HAS APPROVED A DETOUR.
 - ALL TRAFFIC CONTROL SIGNAGE SHALL COMPLY WITH THE LATEST VERSION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- ROAD CLOSURE/DETOUR:
- ROAD CLOSURE/TRAFFIC DETOURS ARE NOT AUTHORIZED FOR THIS PROJECT. A MINIMUM OF ONE LANE OF TRAFFIC SHALL BE OPEN TO VEHICLES AT ALL TIMES.
- TRENCH SAFETY:
- CONTRACTOR SHALL SELECT, DESIGN, FURNISH AND PLACE TRENCH SAFETY SYSTEMS TO PROTECT WORKERS IN ACCORDANCE WITH WISHA, CH 49.17 RCW. CONTRACTOR IS SOLELY RESPONSIBLE FOR SELECTION, DESIGN, AND INSTALLATION OF APPROPRIATE TRENCH SAFETY MEASURES.
- RESTRICTIONS:
- WORK REQUIRING OBSERVATION BY CITY STAFF OR CITY ENGINEER SHALL BE RESTRICTED TO WEEKDAYS (M-F), EXCLUDING HOLIDAYS RECOGNIZED BY CITY OF CARNATION WITH A MINIMUM OF 72 HOURS NOTIFICATION PRIOR TO INSPECTION OR OBSERVATION, EXCEPT AS OTHERWISE AUTHORIZED BY THE CITY ENGINEER.
 - NO PAVEMENT OR ASSOCIATED BASE COURSE OR SUBGRADE WORK SHALL BE PERFORMED BETWEEN OCTOBER 1ST AND MARCH 31ST WITHOUT CITY ENGINEER APPROVAL
- BURIED UTILITIES:
- BURIED UTILITIES SHALL BE LOCATED PRIOR TO START OF EXCAVATION IN ROW. POTENTIAL UTILITY CROSSINGS SHALL BE POTHOLED PRIOR TO EXCAVATION FOR NEW STORM, WATER AND UTILITIES. CONTRACTOR SHALL NOTIFY CARNATION PUBLIC WORKS DIRECTOR AND AFFECTED UTILITY PROVIDER OF ANY UTILITY CONFLICTS. CONTRACTOR SHALL COORDINATE WITH UTILITY PROVIDER FOR RELOCATION OF UTILITIES AND PERFORM WORK NECESSARY TO RELOCATE UTILITIES, AS REQUIRED.
- MATERIALS:
- SUBMITTALS FOR ALL MATERIALS USED IN THE ROW SHALL BE PROVIDED TO THE CITY ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO INSTALLATION.

- SUBMITTALS:
- MATERIAL SUBMITTALS SHALL BE FORWARDED TO THE CITY ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO INSTALLATION AND/OR UTILIZATION.
 - MAINTAIN AT LEAST ONE COPY ON SITE OF ALL MATERIAL SUBMITTALS ACCEPTED BY CITY ENGINEER.
 - ATB AND ASPHALT MIX DESIGNS SHALL BE WSDOT APPROVED MIX DESIGNS.
 - SUBMIT PLAN FOR PROTECTING INFILTRATION DRAINAGE SYSTEM FROM CONTAMINATION BY CONSTRUCTION STORMWATER RUNOFF.
 - WITHIN 2 WORK DAYS OF DELIVERY, SUBMIT ONE COPY OF EVERY CONCRETE, ASPHALT AND ATB DELIVERY TRUCK TICKETS, TO CITY ENGINEER, FOR ALL CONCRETE, ASPHALT AND ATB INSTALLED WITHIN THE ROW. DELIVERY TICKETS SHALL INDICATE CLASS OF CONCRETE OR ASPHALT DELIVERED AND THE DATE AND SOURCE.
 - WITHIN 2 WORK DAYS OF TEST, SUBMIT ONE COPY OF EACH COMPACTION TEST OR LABORATORY TEST PERFORMED FOR WORK IN ROW, TO CITY ENGINEER. WITHIN 3 WORKING DAYS OF SITE VISIT, SUBMIT ONE COPY OF EACH OF THE GEOTECHNICAL ENGINEER'S FIELD REPORTS FOR WORK IN ROW, TO CITY ENGINEER.
- CONSTRUCTION REQUIREMENTS:
- CITY OF CARNATION PUBLIC WORKS DIRECTOR OR CITY ENGINEER SHALL APPROVE ALL WORK PERFORMED IN ROW.
 - SUBGRADE FOR PAVEMENT AND SIDEWALKS SHALL BE PREPARED IN ACCORDANCE WITH WSDOT STD SPECS SECTIONS 2-03 AND 2-06.
 - GRAVEL BASE FOR PAVEMENT AND SIDEWALKS SHALL BE INSTALLED IN ACCORDANCE WITH WSDOT STD SPECS SECTION 4-04.
 - ASPHALT TREATED BASE (ATB) SHALL BE INSTALLED IN ACCORDANCE WITH WSDOT STD SPECS SECTION 4-06.
 - ASPHALT PAVEMENT SHALL BE INSTALLED IN ACCORDANCE WITH WSDOT STD SPECS SECTION 5-04.
 - STORM DRAINAGE SHALL BE INSTALLED IN ACCORDANCE WITH WSDOT STD SPECS SECTIONS 7-04, 7-05, AND 7-08.
 - CURBS AND GUTTERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH WSDOT STD SPECS SECTION 8-04. SIDEWALKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH WSDOT STD SPECS SECTION 8-14.
 - PERMANENT SIGNAGE SHALL BE INSTALLED IN ACCORDANCE WITH WSDOT STD SPECS SECTION 8-21.
 - PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH WSDOT STD SPECS SECTION 8-22.
 - PROJECT GEOTECHNICAL ENGINEER SHALL OBSERVE, TEST, AND APPROVE SUBGRADE BELOW ALL STREET WIDENING BEFORE AGGREGATE BASE AND ATB ARE INSTALLED AND SHALL PROVIDE WRITTEN ACCEPTANCE TO CITY. PROJECT GEOTECHNICAL ENGINEER SHALL OBSERVE, TEST, AND APPROVE TRENCH BACKFILL AND CRUSHED SURFACING TOP COURSE (CSTC) ROAD BASE BEFORE STREET ASPHALT IS INSTALLED AND SHALL PROVIDE WRITTEN ACCEPTANCE TO CITY. COMPACTION TESTING FOR SUBGRADE AND GRAVEL BASE SHALL COMPLY WITH WSDOT STD SPECS SECTION 2-03.3(14)D. COMPACTION TESTING SHALL BE PERFORMED FOR EVERY 400 SQUARE FEET OF SUBGRADE AND GRAVEL BASE, PER LIFT, EXCEPT MORE FREQUENT TESTING SHALL BE PERFORMED AS DIRECTED BY CITY ENGINEER OR GEOTECHNICAL ENGINEER BASED ON OBSERVABLE SOIL CONDITIONS OR FAILED TESTS. HABITAT FOR HUMANITY SHALL PROVIDE FOR IN-PLACE COMPACTION TESTING AND A COPY OF ALL TEST RESULTS SHALL BE PROVIDED TO CITY ENGINEER. CONTRACTOR SHALL PROOF ROLE ANY AND ALL LOCATIONS DESIGNATED BY PROJECT GEOTECHNICAL ENGINEER OR CITY ENGINEER REPRESENTATIVE.
 - CURB/GUTTER/SIDEWALK GRADES, STREET BASE AND SURFACE GRADES, AND PIPE GRADES SHALL BE MAINTAINED BY USE OF A LASER.
 - TRENCH AND EXCAVATION BACKFILL, PIPE AND DRAINAGE STRUCTURE BEDDING, AND ROAD BASE SHALL BE CRUSHED SURFACING TOP COURSE (CSTC) AND/OR BASE COURSE PER 2012 WSDOT STD SPEC SECTION 9-03.9(3). ASPHALT PAVEMENT SHALL BE CLASS 1/2" PG 64-22; ALL MEET LINES SHALL BE TACKED AND SEALED. TACK COAT SHALL BE CSS-1, EMULSIFIED ASPHALT. ATB SHALL BE PLACED AND COMPACTED IN MAXIMUM 3-INCH THICK LIFTS. HOT MIX ASPHALT (HMA) SHALL BE PLACED AND COMPACTED IN MAXIMUM 2-INCH THICK LIFTS. ALL HMA PATCHES AND HMA SURFACES SHALL BE COMPACTED BY ROLLING FLAT AND SLOPED TO SURFACE DRAIN WITHOUT PUDDLES OR PONDING. ALL VALVE BOXES, GRATES, COVERS, VALVE PITS AND SURFACE UTILITY FEATURES SHALL BE ADJUSTED TO MATCH ASPHALT FINISH GRADE.

- ATB SHALL NOT BE PLACED UNTIL ALL BURIED UTILITIES HAVE BEEN INSTALLED BENEATH IT.
 - FINISH GRADE INFORMATION SHOWN ON DRAWINGS MAY BE INCOMPLETE OR INSUFFICIENT FOR CONSTRUCTION OF CONCRETE CURB/GUTTER AND ASPHALT STREET SURFACES. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING MISSING INFORMATION AND FOR RESOLVING INCONSISTENCIES SO THAT STREET ASPHALT AND GUTTER SURFACES RESULT IN SURFACE RUNOFF TO CONCRETE GUTTERS, ASPHALT THICKENED EDGES, AND STORM CATCH BASINS - NO PUDDLING/PONDING SHALL RESULT. NEW STREET ASPHALT AND/OR CONCRETE GUTTERS SHALL BE RE-GRADED AS REQUIRED TO ELIMINATE PUDDLES/PONDING.
 - SIDEWALKS IN ROW SHALL BE 3,000 PSI PORTLAND CEMENT CONCRETE, WITH FULL DEPTH EXPANSION JOINTS AT MAXIMUM 15 FEET ON CENTER. APPLY CURING COMPOUND. SIDEWALK AGGREGATE BASE SHALL BE COMPACTED TO 95% MAXIMUM DRY DENSITY (MDD) PER ASTM D1557 (MODIFIED PROCTOR). CITY ENGINEER SHALL OBSERVE AND ACCEPT SUBGRADE AND AGGREGATE BASE COURSE BEFORE PLACEMENT OF CONCRETE. SIDEWALKS SHALL DRAIN TO SIDES - NO PUDDLES. SIDEWALK REPLACEMENT WORK SHALL BE PLANNED, SEQUENCED, AND PERFORMED IN SUCH MANNER AS TO MINIMIZE AMOUNT OF TIME, BETWEEN SIDEWALK DEMOLITION AND SIDEWALK REPLACEMENT, TO LEAST AMOUNT NECESSARY TO PERFORM THE WORK. DURING SIDEWALK REPLACEMENT, INSTALL SIGNS AT EACH END NOTIFYING PUBLIC THAT SIDEWALK IS TEMPORARILY CLOSED. PROTECT CONCRETE SURFACES FROM DAMAGE - CRACKED CONCRETE WORK SHALL BE REPLACED.
 - PVC PIPE CONNECTIONS TO CONCRETE STRUCTURES SHALL HAVE SAND COLLARS OR APPROVED EQUAL MEANS OF CONNECTION.
- TEMPORARY EROSION AND SEDIMENTATION CONTROL:
- PREVENT SILT-LADEN (TURBID) RUNOFF FROM REACHING PUBLIC STORM DRAINS OR NEW INFILTRATION TRENCH. INFILTRATION TRENCH SHALL NOT BE USED AS A SEDIMENTATION FACILITY. PLUG INLET TO STORMFILTER STRUCTURE UNTIL ALL DRAINAGE BASIN SOILS ARE FINALLY STABILIZED AND STORMFILTER IS INSTALLED AND OPERATIONAL. DO NOT REMOVE PLUG UNTIL APPROVED BY CITY ENGINEER. COVER STORM DRAINS WITH STORM INLET PROTECTION CONFORMING TO WSDOT STD PLAN 1-40.20-00, INSPECT DAILY, AND CLEAN INLETS TO PREVENT BYPASS OR OVERTOPPING.
 - STREETS AND SIDEWALKS SHALL BE KEPT FREE OF DUST, DIRT AND MUD AND STREET SHALL BE MECHANICALLY SWEEP DAILY OR AS OTHERWISE NEEDED.
 - BLOWING DUST SHALL BE PREVENTED. IF REQUIRED, A TANKER WATERING TRUCK SHALL BE UTILIZED TO KEEP DUST FROM FORMING.
- SURVEY CONTROL:
- SURVEY CONTROL AND LAYOUT STAKING SHALL BE PERFORMED BY LICENSED SURVEYOR AND SHALL CONFORM WITH APPROVED DRAWINGS. AS-BUILT LOCATIONS AND ELEVATIONS SHALL BE SURVEYED AND INCORPORATED INTO CONSTRUCTION AS-BUILT DRAWINGS PROVIDED TO THE CITY. STATIONING SHALL BE FIELD MARKED ON PAVEMENT AND MAINTAINED THROUGHOUT CONSTRUCTION.
- RECORD DRAWINGS:
- PROVIDE AS-BUILT DRAWINGS SHOWING LOCATION AND CONFIGURATION OF STREET AND PEDESTRIAN IMPROVEMENTS, UTILITIES, SIGNAGE AND TRAFFIC CONTROL.
- CLEANLINESS:
- ALL ROW WORK AREAS SHALL BE KEPT CLEAR OF DEBRIS ON A DAILY BASIS.
 - ALL STORM DRAIN STRUCTURES SHALL BE CLEANED BY VACTOR TRUCK, OR OTHER METHOD APPROVED BY CITY ENGINEER, BEFORE FINAL ACCEPTANCE.

C:\Temp\kcpublish_10756\CD 02.00 CR.dwg

Jun 06, 2023 - 9:20am RossG

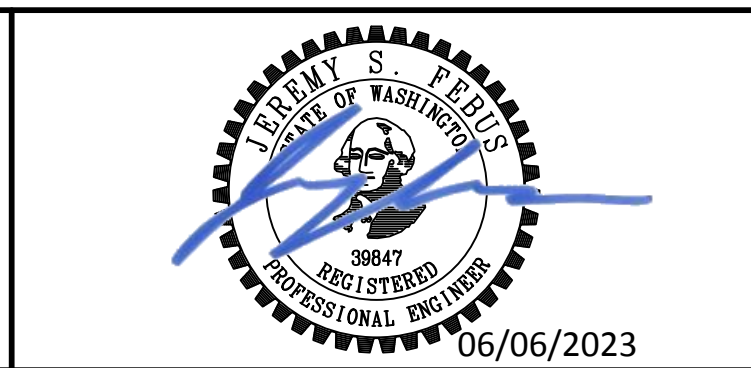
NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD	DESIGNED BY WTJ
CHECKED BY WTJ	APPROVED BY JSF
DATE 12/22/2022	
J O B No. :2000639	

CALL TWO BUSINESS DAYS BEFORE YOU DIG
1-800-424-5555

SCALE:
AS NOTED

kpff
1601 5th Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
www.kpff.com



TOLT PLACE CARNATION, WASHINGTON	SHEET
GENERAL NOTES	C0.01

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.

CITY OF CARNATION GENERAL UTILITY PIPE TRENCHING AND TRENCH PATCHING NOTES

GENERAL CIVIL NOTES

- TRENCHES SHALL BE EXCAVATED TO THE LINE AND DEPTH DESIGNATED BY THE PLANS TO PROVIDE THE COVER OVER THE WATER SYSTEM, SANITARY SEWER SYSTEM, OR STORM WATER SYSTEM AS SPECIFIED BY THE CITY. EXCEPT FOR UNUSUAL CIRCUMSTANCES WHERE APPROVED BY THE CITY, THE TRENCH SIDES SHALL BE EXCAVATED VERTICALLY AND THE TRENCH WIDTH SHALL BE EXCAVATED ONLY TO SUCH WIDTHS AS ARE NECESSARY FOR ADEQUATE WORKING SPACE AS ALLOWED BY THE GOVERNING AGENCY. THE TRENCH SHALL BE KEPT FREE FROM WATER UNTIL PIPE JOINING IS COMPLETE. SURFACE WATER SHALL BE DIVERTED SO AS NOT TO ENTER THE TRENCH. THE CONTRACTOR SHALL MAINTAIN SUFFICIENT PUMPING EQUIPMENT ON THE JOB TO ENSURE THAT THESE PROVISIONS ARE CARRIED OUT.
- THE CONTRACTOR SHALL PERFORM ALL EXCAVATION OF EVERY DESCRIPTION AND WHATEVER SUBSTANCE ENCOUNTERED AND BOULDERS, ROCKS, ROOTS, AND OTHER OBSTRUCTIONS SHALL BE ENTIRELY REMOVED OR CUT OUT TO THE WIDTHS OF THE TRENCH AND TO A DEPTH 6 INCHES BELOW UTILITY PIPE GRADE. WHERE MATERIALS ARE REMOVED FROM BELOW UTILITY PIPE GRADE, THE TRENCH SHALL BE BACKFILLED TO GRADE WITH FOUNDATION GRAVEL AND THOROUGHLY COMPACTED.
- TRENCHING AND SHORING OPERATIONS SHALL NOT PROCEED MORE THAN 100 FEET IN ADVANCE OF PIPE LAYING WITHOUT APPROVAL OF THE CITY, AND SHALL BE IN CONFORMANCE WITH WASHINGTON INDUSTRIAL SAFETY AND HEALTH ADMINISTRATION (WISHA) AND OFFICE OF SAFETY AND HEALTH ADMINISTRATION (OSHA) SAFETY STANDARD.
- MATERIAL EXCAVATED FROM TRENCHES AND PILED ADJACENT TO THE TRENCH, OR IN A ROADWAY OR PUBLIC THROUGHFARE, SHALL BE PILED AND MAINTAINED SO THAT THE TOE OF THE SLOPE OF THE MATERIAL IS AT LEAST 3 FEET FROM THE EDGE OF THE TRENCH. IT SHALL BE PILED IN SUCH A MANNER AS WILL CAUSE A MINIMUM OF INCONVENIENCE TO PUBLIC TRAVEL, AND PROVISIONS SHALL BE MADE FOR TRAFFIC CONTROL AS NECESSARY. FREE ACCESS SHALL BE PROVIDED TO FIRE HYDRANTS, WATER VALVES, AND METERS, AND CLEARANCE SHALL BE LEFT TO ENABLE FREE FLOW OF STORM WATER IN GUTTERS, OTHER CONDUITS, AND NATURAL WATERCOURSES.
- OPEN-CUT TRANSVERSE CROSSINGS OF ROADWAYS AFTER FINAL PAVING ARE NOT TO BE PERMITTED UNLESS IT CAN BE SHOWN THAT ALTERNATIVES SUCH AS JACKING, AUGURING OR TUNNELING ARE NOT FEASIBLE OR UNLESS THE UTILITY CAN BE INSTALLED JUST PRIOR TO RECONSTRUCTION OR AN OVERLAY OF THE ROAD. SHOULD AN OPEN CUT BE APPROVED, ALL TRANSVERSE TRENCHES SHALL BE BACKFILLED WITH CRUSHED SURFACING OR CONTROLLED DENSITY FILL.
- WHERE TRENCH EXCAVATION EQUALS OR EXCEEDS A DEPTH OF 4 FEET, THE CONTRACTOR SHALL PROVIDE, CONSTRUCT, MAINTAIN AND REMOVE, AS REQUIRED, SAFETY SYSTEMS THAT MEET THE REQUIREMENTS OF THE WASHINGTON INDUSTRIAL SAFETY AND HEALTH ACT, RCW 49.17, INCLUDING WAC 296-155. THE TRENCH SAFETY SYSTEMS SHALL BE DESIGNED BY A QUALIFIED PERSON, AND MEET ACCEPTED ENGINEERING REQUIREMENTS (SEE WAC 296-155-660).
- THE CONTRACTOR SHALL ADEQUATELY SHORE TRENCHES TO PROTECT THE WORK, EXISTING PROPERTY, UTILITIES, PAVEMENT, ETC., AND TO PROVIDE SAFE WORKING CONDITIONS IN THE TRENCH. THE METHOD OF SHORING SHALL BE ACCORDING TO THE CONTRACTOR'S DESIGN. THE CONTRACTOR MAY ELECT TO USE A COMBINATION OF SHORING OR OVER BREAK, TUNNELING, BORING, SLIDING TRENCH SHIELDS, OR OTHER METHODS OF ACCOMPLISHING THE WORK, PROVIDED THE METHOD MEETS ALL APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY CODES. DAMAGES RESULTING FROM IMPROPER SHORING OR FROM FAILURE TO SHORE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. REMOVAL OF ANY SHORING FROM THE TRENCH SHALL BE ACCOMPLISHED IN SUCH A MANNER AS TO ASSURE THAT NO DAMAGE IS DONE TO THE PIPE OR WORK.
- WHERE WATER IS ENCOUNTERED IN THE TRENCH, IT SHALL BE REMOVED DURING PIPE-LAYING OPERATIONS AND THE TRENCH SO MAINTAINED UNTIL THE ENDS OF THE PIPE ARE SEALED AND PROVISIONS ARE MADE TO PREVENT FLOATING OF THE PIPE. TRENCH WATER OR OTHER DELETERIOUS MATERIALS SHALL NOT BE ALLOWED TO ENTER THE PIPE AT ANY TIME.
- THE CONTRACTOR SHALL FURNISH, INSTALL, AND OPERATE ALL NECESSARY EQUIPMENT TO KEEP THE TRENCH ABOVE THE FOUNDATION LEVEL FREE FROM WATER DURING CONSTRUCTION, AND SHALL DEWATER AND DISPOSE OF THE WATER SO AS NOT TO CAUSE INJURY TO PUBLIC OR PRIVATE PROPERTY OR NUISANCE TO THE PUBLIC. SUFFICIENT PUMPING EQUIPMENT IN GOOD WORKING CONDITION SHALL BE AVAILABLE AT ALL TIMES FOR ALL EMERGENCIES, INCLUDING POWER OUTAGE, AND SHALL HAVE AVAILABLE AT ALL TIMES COMPETENT WORKERS FOR THE OPERATION OF THE PUMPING EQUIPMENT.
- WHEN NATIVE MATERIAL AT THE TRENCH BOTTOM IS STONY OR OTHERWISE NON-UNIFORM, THE TRENCH SHALL BE OVER-EXCAVATED A MINIMUM OF 6 INCHES BELOW THE SPECIFIED GRADE AND A LAYER OF PIPE BEDDING MATERIAL SHALL BE FURNISHED AND PLACED BY THE CONTRACTOR TO THE SPECIFIED GRADE. AFTER THE PIPE IS IN PLACE ADDITIONAL HAND SELECTED NATIVE MATERIAL MEETING THE REQUIREMENTS FOR BEDDING MATERIAL SHALL BE PLACED AND TAMPED AROUND THE PIPE FOR A MINIMUM OF 6 INCHES ABOVE THE CROWN OF THE PIPE.
- IF THE NATIVE MATERIAL AT THE TRENCH BOTTOM IS UNSUITABLE FOR FOUNDATION PURPOSES OR WILL HAVE DIFFICULTY PROVIDING UNIFORM BEARING FOR THE PIPE, SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH A MINIMUM OF 6 INCHES OF COMPACTED FOUNDATION MATERIAL.
- BEDDING MATERIAL SHALL BE AS SPECIFIED ON THE APPROVED DRAWINGS OR NOTES. THE BEDDING MATERIAL SHALL BE CARRIED UP EVENLY ON BOTH SIDES OF THE PIPE SIMULTANEOUSLY IN APPROXIMATELY 6-INCH LAYERS AND EACH LAYER THOROUGHLY COMPACTED WITH APPROPRIATE TOOLS IN SUCH MANNER AS TO AVOID INJURING OR DISTURBING THE COMPLETED PIPELINE. ALL BEDDING AND NATIVE MATERIAL SHALL BE STORED AWAY FROM THE EDGES OF EXCAVATION AND OFF THE PAVED ROADWAY AND SHOULDER.
- ALL TRENCH BACKFILL SHALL BE MECHANICALLY COMPACTED TO 95% OF MAXIMUM DENSITY (ASTM D 1557 MODIFIED PROCTOR TEST) WITHIN THE RIGHT-OF-WAY AND IN ALL AREAS (PAVED AND UNPAVED) WHERE STREETS, ROADWAY SHOULDERS, DRIVEWAYS, SIDEWALKS, OR PARKING LOTS WILL BE CONSTRUCTED OR RECONSTRUCTED OVER THE TRENCH EXCEPT FOR TRENCHES OVER 8 FEET IN DEPTH. WHEN THE TRENCH DEPTH EXCEEDS 8 FEET, TRENCH BACKFILL UP TO 4 FEET FROM THE TOP OF THE TRENCH MAY BE WATER SETTLED OR MECHANICALLY COMPACTED TO 90% OF THE MAXIMUM DENSITY. THE UPPER 4 FEET SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY.
- BACKFILL SHALL BEGIN IMMEDIATELY AFTER INSPECTION AND APPROVAL OF THE INSTALLATION BY THE CITY. BACKFILL COMPACTION ON PRIVATE PROPERTY IS THE OWNER'S RESPONSIBILITY.
- THE BOTTOM OF THE TRENCH SHALL BE FINISHED TO GRADE WITH HAND TOOLS IN SUCH A MANNER THAT THE PIPE WILL HAVE BEARING ALONG THE ENTIRE LENGTH OF THE BARREL. THE BELL HOLES SHALL BE EXCAVATED WITH HAND TOOLS TO SUFFICIENT SIZE TO MAKE UP THE JOINT.
- SUITABLE NATIVE MATERIAL EXCAVATED DURING TRENCHING MAY BE USED FOR TRENCH BACKFILL OUTSIDE OF SIDEWALK AND PAVEMENT AREAS UNLESS NOTIFIED BY THE CITY THAT THE NATIVE MATERIAL IS UNSUITABLE. THE CITY OR REPRESENTATIVE WILL EXAMINE EXCAVATED NATIVE MATERIAL AT THE TIME OF EXCAVATION TO DETERMINE ITS SUITABILITY FOR USE AS BACKFILL. NATIVE MATERIAL WILL BE CONSIDERED SUITABLE FOR TRENCH BACKFILL IF IT IS:
 - CAPABLE OF ATTAINING THE DEGREE OF COMPACTION SPECIFIED WITHIN REASONABLE TOLERANCE OF OPTIMUM MOISTURE CONTENT.
 - REASONABLY FREE OF ORGANIC MATERIAL, CLAY, FROZEN LUMPS, ROCKS GREATER THAN 2 INCHES, OR OTHER DELETERIOUS MATTER.
- UNSUITABLE BACKFILL MATERIAL SHALL BE REMOVED FROM THE SITE AND HAULED TO AN APPROVED DISPOSAL SITE. THE CITY SHALL BE PROVIDED WITH THE LOCATION OF ALL DISPOSAL SITES TO BE USED AND ALSO COPIES OF THE PERMITS AND APPROVALS FOR SUCH DISPOSAL SITES.
- PERPENDICULAR OPEN CUT CROSSINGS OF ANY PUBLIC RIGHT OF WAY SHALL REQUIRE CONTROLLED DENSITY FILL (CDF) OR 100% IMPORT OF CRUSHED SURFACING BASE AND TOP COURSE UNLESS WAIVED BY THE CITY.
- UNDER SIDEWALK OR PAVEMENT AREAS, IMPORTED MATERIAL SHALL MEET THE REQUIREMENTS OF CRUSHED SURFACING TOP COURSE (CSTC) AS SPECIFIED IN THE WSDOT STD. SPECS SECTION 9-03.9(3). IN OTHER AREAS, IMPORTED MATERIAL SHALL MEET THE REQUIREMENTS OF CSTC OR GRAVEL BORROW AS SPECIFIED IN THE WSDOT STD. SPECS SECTION 9-03.14(1). IN BACKFILLING THE TRENCH, THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE PIPE FROM ANY DAMAGE OR SHIFTING. THE CONTRACTOR SHALL BACKFILL FROM THE SIDE OF THE TRENCH TO A MAXIMUM UNIFORM DEPTH OF 1 FOOT ABOVE THE CROWN OF THE PIPE BEFORE STARTING MECHANICAL COMPACTION.
- DURING ALL PHASES OF THE BACKFILLING OPERATIONS AND TESTING AS OUTLINED HEREIN, THE CONTRACTOR SHALL PROTECT THE PIPE INSTALLATION, PROVIDE FOR THE MAINTENANCE OF TRAFFIC AS MAY BE NECESSARY, AND PROVIDE FOR THE SAFETY OF PROPERTY AND PERSONS.
- WHERE GOVERNMENTAL AGENCIES OTHER THAN THE CITY HAVE JURISDICTION OVER ROADWAYS, THE BACKFILL AND COMPACTION SHALL BE DONE TO THE SATISFACTION OF THE AGENCY HAVING JURISDICTION. IF SUITABLE BACKFILL MATERIAL IS NOT AVAILABLE FROM TRENCHING OPERATIONS OR TEMPORARY TRAFFIC CONTROL AND TRAFFIC SAFETY ISSUES EXIST, THE CITY MAY ORDER THE PLACING OF BEDDING AROUND THE WATER MAIN AND GRAVEL BASE OR CONTROLLED DENSITY FILL FOR BACKFILLING THE TRENCH.
- CONTROLLED DENSITY FILL (CDF, AKA FLOWABLE FILL) SHALL BE A MIXTURE OF PORTLAND CEMENT, FLYASH (OPTIONAL), AGGREGATES, AND WATER. IT SHALL BE PROPORTIONED TO PROVIDE A GROUTY, NON-SEGREGATING, FREE FLOWING, SELF-CONSOLIDATING AND EXCAVATABLE MATERIAL THAT WILL RESULT IN A NON-SETTLING FILL WHICH HAS MEASURABLE UNCONFINED COMPRESSIVE STRENGTH. UNLESS OTHERWISE SPECIFIED, UNIT WEIGHTS SHALL RANGE FROM 125 LBS. PER CUBIC FOOT TO 155 LBS. PER CUBIC FOOT.
- MATERIALS TESTING SHALL BE WITH UNCONFINED COMPRESSIVE TEST CYLINDERS. TEST DATA MAY BE EITHER LABORATORY TRAIL BATCH DATA OR FIELD TEST DATA.
- SPECIFIC MIX DESIGNS MAY BE REQUIRED AT THE ENGINEER'S DISCRETION. APPROVED SOURCES ARE STONEMAN AND CADMAN.
- THE UNCONFINED COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE A MINIMUM OF 50 PSI AND A MAXIMUM OF 100 PSI. MATERIAL SHALL BE A SAND/GROUT SLURRY PROPORTIONED TO BE HAND-EXCAVATABLE AFTER LONG-TERM STRENGTH GAIN.
- IF CDF IS USED FOR TRENCH BACKFILL ON DUCTILE IRON, STEEL, OR COPPER UTILITY MAINS OR SERVICES, THE MAINS AND SERVICES SHALL BE ENCASED IN POLYETHYLENE WRAP.
- TRENCH BACKFILL SHALL BE SPREAD IN LAYERS AND BE COMPACTED BY MECHANICAL TAMPERS OF THE IMPACT TYPE APPROVED BY THE ENGINEER. WATER SETTling WILL NOT BE PERMITTED. AFTER THE INITIAL BACKFILL IS PLACED THE REMAINING BACKFILL MATERIAL SHALL BE PLACED IN SUCCESSIVE LAYERS NOT EXCEEDING 1 FOOT IN LOOSE THICKNESS, AND EACH LAYER SHALL BE COMPACTED TO THE DENSITY SPECIFIED BELOW:
 - IMPROVED AREAS SUCH AS STREET AND SIDEWALK AREAS SHALL BE COMPACTED TO 95% OF MAXIMUM DRY DENSITY (MDD) PER ASTM D-1557 (MODIFIED PROCTOR).
 - UNIMPROVED AREAS OF LANDSCAPE AREAS SHALL BE COMPACTED TO 90% OF MDD PER ASTM D-1557.
- THE EXISTING ASPHALT SURFACE SHALL BE CUT ON A NEAT LINE BY SAW CUTTING, JACK-HAMMERING OR OTHER APPROVED METHOD PRIOR TO EXCAVATION TO PROVIDE A CONTINUOUS LINE. FOLLOWING PROPER BACKFILL AND COMPACTION OF THE TRENCH, THE EDGES OF THE SURFACING SHALL BE RETRIMMED (SAW CUT) 12 INCHES WIDER THAN THE EXCAVATION WITH STRAIGHT VERTICAL EDGES FREE FROM IRREGULARITIES. CRUSHED SURFACING TOP COURSE SHALL BE PLACED TO A COMPACTED THICKNESS OF 6 INCHES.
- TEMPORARY RESTORATION OF TRENCHES SHALL BE ACCOMPLISHED BY USING 2-INCH LAYER OF HOT MIX ASPHALT CONCRETE PAVEMENT WHEN AVAILABLE OR 2-INCH LAYER OF MEDIUM-CURING (MC-250) LIQUID ASPHALT (COLD MIX), 2-INCH LAYER OF ASPHALT TREATED BASE (ATB), OR STEEL PLATES.
- ATB USED FOR TEMPORARY RESTORATION MAY BE DUMPED DIRECTLY INTO THE TRENCH, BLADED AND ROLLED. AFTER ROLLING, THE TRENCH MUST BE FILLED FLUSH WITH THE EXISTING ASPHALT CONCRETE PAVEMENT TO PROVIDE A SMOOTH RIDING SURFACE.
- ALL TEMPORARY PATCHES SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL SUCH TIME AS THE PERMANENT PAVEMENT PATCH IS IN PLACE. IF THE CONTRACTOR IS UNABLE TO MAINTAIN A PATCH FOR WHATEVER REASON, THE CITY WILL PATCH IT AT ACTUAL COST PLUS OVERHEAD AND MATERIALS.
- TRENCH RESTORATION SHALL BE EITHER BY A HMA PATCH OR HMA PATCH PLUS OVERLAY AS REQUIRED BY THE CITY.
- ALL TRENCH AND PAVEMENT CUTS SHALL BE MADE BY SPADE BLADED JACKHAMMER OR SAW CUTS. ALL CUTS SHALL BE A MINIMUM DISTANCE OUTSIDE THE TRENCH WIDTH OF 12 INCHES.
- REPLACEMENT OF THE ASPHALT CONCRETE OR PORTLAND CEMENT CONCRETE SHALL BE OF EXISTING DEPTH PLUS 3 INCHES.
- TACK SHALL BE APPLIED TO THE EXISTING PAVEMENT AND EDGE OF CUT AND SHALL BE EMULSIFIED ASPHALT GRADE CSS-1 AS SPECIFIED IN THE STANDARD SPECIFICATIONS. TACK COAT SHALL BE APPLIED AS SPECIFIED IN THE STANDARD SPECIFICATIONS.
- HOT MIX ASPHALT SHALL BE PLACED ON THE PREPARED SURFACE BY AN APPROVED PAVING MACHINE AND SHALL BE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, EXCEPT THAT LONGITUDINAL JOINTS BETWEEN SUCCESSIVE LAYERS OF ASPHALT CONCRETE SHALL BE DISPLACED LATERALLY A MINIMUM OF 12 INCHES UNLESS OTHERWISE APPROVED BY THE CITY. FINE AND COARSE AGGREGATE SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. ASPHALT CONCRETE OVER 2 INCHES THICK SHALL BE PLACED IN EQUAL LIFTS NOT TO EXCEED 2 INCHES EACH.
- ALL STREET SURFACES, WALKS OR DRIVEWAYS WITHIN THE STREET TRENCHING AREAS AFFECTED BY THE TRENCHING SHALL BE FEATHERED AND LEVELED TO AN EXTENT THAT PROVIDES A SMOOTH-RIDING CONNECTION AND EXPEDITES DRAINAGE FLOW FOR THE NEWLY PAVED SURFACE. LEVELING AND FEATHERING AS REQUIRED BY THE CITY SHALL BE ACCOMPLISHED BY RAKING OUT THE OVERSIZED AGGREGATES FROM THE HMA AS APPROPRIATE.
- SURFACE SMOOTHNESS SHALL BE PER THE STANDARD SPECIFICATIONS.
- ALL JOINTS SHALL BE SEALED USING EMULSIFIED ASPHALT.
- WHEN TRENCHING WITHIN THE ROADWAY SHOULDER(S), THE SHOULDER SHALL BE RESTORED TO ITS ORIGINAL OR BETTER CONDITION.
- THE FINAL PATCH SHALL BE COMPLETED AS SOON AS POSSIBLE AND SHALL BE COMPLETED WITHIN 30 DAYS AFTER FIRST OPENING THE TRENCH. THIS TIME FRAME MAY BE ADJUSTED IF DELAYS ARE DUE TO INCLEMENT PAVING WEATHER, OR OTHER ADVERSE CONDITIONS THAT MAY EXIST. HOWEVER, DELAYING OF FINAL PATCH OR OVERLAY WORK IS ALLOWABLE ONLY SUBJECT TO THE CITY'S APPROVAL.

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF CARNATION ENGINEERING STANDARDS AND 2018 WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION UNLESS NOTED OTHERWISE.
- A COPY OF THE APPROVED PLANS AND WSDOT STANDARD SPECIFICATIONS SHALL BE ON SITE AT ALL TIMES DURING CONSTRUCTION.
- PRIOR TO ANY CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL SCHEDULE AND ATTEND A PRE-CONSTRUCTION CONFERENCE WITH THE CITY ENGINEER AND INSPECTOR. THE CONTRACTOR SHALL NOTIFY THE OWNER AND PROJECT ENGINEER OF THE PRECONSTRUCTION MEETING TIME AND LOCATION AT LEAST 72 HOURS IN ADVANCE OF THE MEETING.
- ALL LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD THEREFORE BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN AND TO FURTHER DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN HEREON WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN.
- LOCATE AND PROTECT ALL CASTINGS AND UTILITIES TO REMAIN DURING CONSTRUCTION AND SHALL CONTACT THE UNDERGROUND UTILITIES LOCATOR SERVICE (811) AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
- ADJUST ALL EXISTING MANHOLE RIMS, DRAINAGE STRUCTURE LIDS, VALVE BOXES, AND UTILITY ACCESS STRUCTURES, TO REMAIN, TO FINISH GRADE WITHIN AREAS AFFECTED BY THE PROPOSED IMPROVEMENTS.
- FIELD VERIFY THE HORIZONTAL AND VERTICAL POSITION OF ALL PROPOSED UTILITY POINTS OF CONNECTION, AND SHALL POTHOLE ALL CROSSINGS WITH EXISTING UTILITIES PRIOR TO COMMENCING EXCAVATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY CONFLICTS OR DISCREPANCIES IMMEDIATELY.
- UNLESS OTHERWISE INDICATED ON CIVIL OR LANDSCAPE PLANS, ALL DISTURBED AREAS ARE TO BE HYDROSEED FOLLOWING CONSTRUCTION. HYDROSEED SHALL BE PER LANDSCAPE.
- EXISTING ON-SITE WELL SHALL BE DECOMMISSIONED PRIOR TO CONSTRUCTION. WELL DECOMMISSIONING SHALL BE EXECUTED PER WASHINGTON STATE DEPARTMENT OF ECOLOGY AND DEPARTMENT OF HEALTH. A COPY OF THE REPORT SHALL BE PROVIDED TO THE OWNER AND PROJECT ENGINEER.

NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD	DESIGNED BY WTJ
CHECKED BY WTJ	APPROVED BY JSF
DATE 12/22/2022	
J O B No. :2000639	

CALL TWO BUSINESS DAYS BEFORE YOU DIG
1-800-424-5555

S C A L E:
AS NOTED



TOLT PLACE CARNATION, WASHINGTON	SHEET
GENERAL NOTES	C0.02

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.

CITY OF CARNATION GENERAL WATER NOTES

- PRIOR TO ANY PAVEMENT CUTTING OR REMOVAL, OR EXCAVATION FOR PIPE LAYING, THE CONTRACTOR SHALL VERIFY, IN THE PRESENCE OF THE CITY'S INSPECTOR, THE LOCATION AND DEPTH OF THE EXISTING WATER MAINS AT THE POINTS WHERE CONNECTIONS ARE TO BE MADE. THE CONTRACTOR SHALL VERIFY THE DIMENSIONS, TYPE, AND CONDITION OF THE EXISTING WATER MAIN. IF NECESSARY, THE GRADE SHALL BE ADJUSTED SO NEITHER A HIGH SPOT NOR A LOW SPOT IS CREATED ADJACENT TO THE CONNECTION TO THE EXISTING WATER MAINS.
- WATER MAINS, PARALLEL TO A SEWER, SHALL NORMALLY BE ABOVE AND SEPARATED BY A DISTANCE OF AT LEAST TEN FEET HORIZONTALLY. UNDER UNUSUAL CIRCUMSTANCES, THE HORIZONTAL SPACING MAY BE ADJUSTED, SUBJECT TO THE APPROVAL OF THE CITY. WATER MAINS CROSSING SEWERS SHOULD BE NOT LESS THAN 18 INCHES ABOVE THE SEWER. WHERE IT IS NECESSARY FOR A SEWER TO CROSS WITHIN 18 INCHES, OR OVER THE WATER MAIN, PROTECTIVE MEASURES PER THE DOE CRITERIA FOR SEWAGE WORKS DESIGN (ORANGE BOOK) SHALL BE TAKEN.
- PIPING, VALVES, AND APPURTENANCES SHALL NOT BE BURIED UNTIL OBSERVED AND ACCEPTED BY CITY REPRESENTATIVE. CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING AND SCHEDULING TIMELY SITE OBSERVATIONS BY CITY REPRESENTATIVE.
- TRENCHES SHALL BE EXCAVATED TO THE LINE AND DEPTH DESIGNATED BY THE PLANS TO PROVIDE THE COVER ON THE WATER SYSTEM OR SANITARY SEWER SYSTEM AS SPECIFIED BY THE CITY. PERFORM TRENCHING IN ACCORDANCE WITH THE GENERAL UTILITY PIPE TRENCHING AND TRENCH PATCHING NOTES ON SHEET C0.02.
- BEFORE INSTALLATION, MATERIAL SUBMITTALS SHALL BE SUBMITTED TO THE CITY ENGINEER FOR ACCEPTANCE FOR ALL MATERIALS TO BE INSTALLED. ALL MATERIALS SHALL BE NEW AND UNDAMAGED. WHERE APPLICABLE, THE SAME MANUFACTURER OF EACH ITEM SHALL BE USED THROUGHOUT THE WORK. ALL MATERIALS NOT SPECIFICALLY REFERENCED SHALL COMPLY WITH APPLICABLE SECTIONS OF ANSI, ASTM, AWWA, AND THE STANDARD SPECIFICATIONS.
- APPROVED MANUFACTURERS AND MODEL NUMBERS OF VARIOUS MATERIALS ARE LISTED IN APPROVED MATERIALS LIST INCLUDED WITH THESE STANDARDS. WHEN SPECIFIC MANUFACTURERS OR MODELS ARE LISTED, NO SUBSTITUTIONS WILL BE ALLOWED WITHOUT PRIOR APPROVAL BY THE CITY.

DUCTILE IRON PIPE:

- DUCTILE IRON PIPE SHALL CONFORM TO ANSI SPECIFICATION A21.51, 1976, AWWA C151-76, OR THE LATEST REVISION THEREOF AND SHALL BE OF THE THICKNESS CLASS 52 FOR PIPE UNLESS OTHERWISE SPECIFIED BY THE CITY. THE PIPE SHALL BE FURNISHED WITH RUBBER GASKETED PUSH-ON TYPE JOINTS EXCEPT WHERE FLANGED OR MECHANICAL JOINTS ARE SPECIFICALLY REQUIRED BY THE CITY. JOINT DETAILS SHALL BE AS SPECIFIED IN ANSI A21.11. PIPE WITH PUSH-ON FITTING JOINTS SHALL BE SUITABLE FOR USE WITH MECHANICAL JOINT FITTINGS. THE PIPES SHALL BE COATED AS SPECIFIED IN ANSI A21.51 AND BE FURNISHED WITH CEMENT MORTAR LINING AS SPECIFIED IN ANSI A21.4. THE CONTRACTOR SHALL FURNISH CERTIFICATION FROM THE MANUFACTURER OF THE PIPE AND GASKET BEING SUPPLIED THAT THE INSPECTION OF ALL THE SPECIFIED TESTS HAVE BEEN MADE AND THE RESULTS THEREOF COMPLY WITH THE REQUIREMENTS OF THE ABOVE-REFERENCED STANDARDS.

FITTINGS:

- ALL FITTINGS FOR DUCTILE IRON PIPE SHALL BE DUCTILE IRON COMPACT (SHORT BODY) FITTINGS CONFORMING TO AWWA C153 OR CLASS 250 GRAY IRON CONFORMING TO AWWA C110 AND C111. ALL FITTINGS SHALL BE CEMENT MORTAR LINED CONFORMING TO AWWA C104. PLAIN END FITTINGS SHALL BE DUCTILE IRON IF MECHANICAL JOINT RETAINER GLANDS ARE INSTALLED ON THE PLAIN ENDS. ALL FITTINGS SHALL BE CONNECTED BY FLANGES OR MECHANICAL JOINTS. FLANGES SHALL BE CLASS 125, DRILLED IN ACCORDANCE WITH ANSI A21.10. GASKET FOR FLANGED FITTINGS SHALL BE NEOPRENE, BUNA N, CHLORINATED BUTYL, CLOTH-INSERTED RUBBER, OR APPROVED EQUAL. GASKETS FOR PUSH-ON TYPE AND MECHANICAL JOINTS SHALL CONFORM TO ANSI A21.11. RUBBER GASKETS FOR PUSH-ON JOINTS OR MECHANICAL JOINT (M.J.) SHALL BE IN ACCORDANCE WITH ANSI A21.11, AWWA C111. GASKET MATERIAL FOR FLANGES SHALL BE NEOPRENE, BUNA N, CHLORINATED BUTYL, OR CLOTH-INSERTED RUBBER.

JOINT RESTRAINT SYSTEMS:

- JOINT RESTRAINT METHODS SHALL BE AS PER THE APPROVED MATERIALS LIST AND/OR THE STANDARD DETAILS. ACCEPTABLE JOINT RESTRAINT SYSTEMS ARE LIMITED TO: EBAA IRON (MEGALUG 1100), GRIFFIN PIPE PRODUCTS COMPANY (SNAP-LOK), ROMAC (GRIP RING), PACIFIC STATES RESTRAINED JOINT, US PIPE (TR FLEX), MUELLER (AQUA GRIP), ONE BOLT, FIELD LOK GASKETS.

POLYETHYLENE ENCASEMENT:

- POLYETHYLENE ENCASEMENT SHALL BE EIGHT MIL. TUBE OR SHEET STOCK AND SHALL BE FURNISHED WHERE THE TRENCH IS BACKFILLED WITH CDF, WHERE SOILS TESTING INDICATES THIS IS OF VALUE OR AS DIRECTED BY THE CITY. MATERIALS SHALL COMPLY WITH AWWA C105.

COUPLINGS:

- FLEXIBLE COUPLINGS AND TRANSITION COUPLING CAST COMPONENTS SHALL BE DUCTILE IRON. CENTER RINGS AND END RINGS SHALL BE DUCTILE IRON IN ACCORDANCE WITH ASTM 536-80, GRADE 65-45-12. GASKET MATERIAL SHALL BE VIRGIN SBR IN ACCORDANCE WITH ASTM D2000 3 BA715. BOLTS SHALL BE HIGH STRENGTH, LOW ALLOY STEEL TRACKHEAD BOLTS WITH NATIONAL COURSE ROLLED THREAD AND HEAVY HEX NUTS. STEEL SHALL MEET AWWA/ANSI C11/A21.11 COMPOSITION SPECIFICATIONS. COUPLINGS SHALL BE MANUFACTURED BY ROMAC OR DRESSER.

ADAPTERS:

- ADAPTERS SHALL BE ROMAC FLANGE COUPLING ADAPTERS.

BOLTS IN PIPING:

- BOLTS SHALL BE STAINLESS STEEL. STAINLESS STEEL BOLTS SHALL MEET THE REQUIREMENTS OF ASTM A-307, GRADE A. STAINLESS STEEL NUTS, BOLTS, AND WASHERS SHALL BE TYPE 304/316.

HYDRANTS:

- HYDRANTS SHALL MEET THE REQUIREMENTS OF CITY STANDARD DETAILS.
- THE LEAD FROM THE SERVICE MAIN TO THE FIRE HYDRANT SHALL BE DUCTILE IRON CEMENT MORTAR LINED CLASS 52, NO LESS THAN 6 INCHES IN DIAMETER, WITH A MAXIMUM LENGTH OF 50 FEET. WHERE LEADS REQUIRE MORE THAN ONE LENGTH OF PIPE, FIELD LOK GASKETS ARE REQUIRED.
- FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD DETAILS, AT LOCATIONS AS SHOWN ON THE APPROVED PLANS. THEY SHALL BE PAINTED WITH 2 COATS OF HIGH GLOSS CATERPILLAR YELLOW PRESERVATIVE 43-616 TYPE PAINT.
- ALL HOOK-UPS TO FIRE HYDRANTS FOR TEMPORARY WATER SHALL BE APPROVED BY THE CITY.
- HYDRANTS SHALL STAND PLUMB, BE SET TO THE FINISHED GRADE PER THE STANDARD DETAIL WITH THE LOWEST OUTLET OF THE HYDRANT NO LESS THAN 18 INCHES ABOVE GRADE AND NO LESS THAN 36 INCHES OF CLEAR AREA ABOUT THE HYDRANT FOR CLEARANCE OF A HYDRANT WRENCH ON ALL OUTLETS AND ON THE CONTROL VALVE. THE PUMPER PORT SHALL FACE THE STREET. WHERE THE STREET CANNOT BE CLEARLY DEFINED OR RECOGNIZED, THE PORT SHALL FACE THE MOST LIKELY ROUTE OF APPROACH AND LOCATION OF THE FIRE TRUCK WHILE PUMPING AS DETERMINED BY THE CITY.

VALVES:

- ALL VALVES AND FITTINGS SHALL BE DUCTILE IRON WITH ANSI FLANGES OR MECHANICAL JOINT ENDS. ALL EXISTING VALVES SHALL BE OPERATED BY CITY EMPLOYEES ONLY.
- ALL VALVES SHALL BE INSPECTED UPON DELIVERY IN THE FIELD TO ENSURE PROPER WORKING ORDER AND DAMAGE TO PROTECTIVE COATINGS BEFORE INSTALLATION AND SHALL BE FREE OF ALL RUST AND DIRT. THEY SHALL BE SET AND JOINTED TO THE PIPE IN THE MANNER AS SET FORTH IN THE AWWA STANDARDS FOR THE TYPE OF CONNECTING ENDS FURNISHED. NO VALVES SHALL BE LOCATED IN SUCH POSITION AS TO PLACE THE VALVE CHAMBER OR BOX IN ANY ROADSIDE DITCH, DRAINAGE DITCH, OR CHANNEL.
- GATE VALVES SHALL BE USED ON ALL 4-INCH TO 12-INCH LINES, UNLESS DEPTH RESTRICTIONS NECESSITATE INSTALLATION OF BUTTERFLY VALVE. THE DESIGN, MATERIALS, AND WORKMANSHIP OF ALL GATE VALVES SHALL CONFORM TO EITHER AWWA C509-01 (OR LATEST REVISION) OR AWWA C515-01 (OR LATEST REVISION). GATE VALVES SHALL BE RESILIENT WEDGE NON-RISING STEM (NRS) WITH TWO INTERNAL O-RING STEM SEALS.
- BUTTERFLY VALVES SHALL BE USED ON ALL LINES 14 INCHES AND LARGER UNLESS DESIGNATED BY THE CITY. BUTTERFLY VALVES SHALL CONFORM TO ANSI/AWWA C504, CLASS 150, WITH CAST IRON SHORT BODY AND "O" RING STEM SEAL. VALVES IN CHAMBERS SHALL HAVE A MANUAL CRANK OPERATION. BURIED VALVES SHALL HAVE A STEM EXTENSION WITH AWWA 2-INCH OPERATING NUT AND SUITABLE VALVE BOX.

VALVE BOXES:

- ALL VALVES SHALL HAVE A STANDARD APWA CAST IRON WATER VALVE BOX SET TO GRADE WITH TWO-PIECE, EXTENSION TYPE CAST IRON RISER FROM VALVE. VALVE BOX SHALL HAVE A LUG TYPE COVER, 18" OR 8" TOP AND 24" BOTTOM PER THE STANDARD DETAIL. VALVE BOX LIDS SHALL HAVE THE WORD "WATER" CAST IN THE UPPER SURFACE AND THE VALVE BOX EARS SHALL BE SET IN DIRECTION OF FLOW.
- IN AREAS WHERE VALVE BOX FALLS IN ROAD SHOULDER, THE DITCH AND SHOULDER SHALL BE GRADED BEFORE PLACING ASPHALT OR CONCRETE PAD. THE VALVE AND VALVE BOX SHALL BE SET PLUMB WITH THE VALVE BOX CENTERED ON THE OPERATOR NUT. VALVE BOXES SHALL BE SET FLUSH IN PAVEMENT OR ROAD SHOULDER. SEE STANDARD DETAILS.

- OPERATING VALVE NUT EXTENSION. A VALVE STEM EXTENSION SHALL BE INSTALLED WHENEVER THE VALVE OPERATING NUT IS MORE THAN 3 FEET BELOW FINISHED GRADE. EXTENSIONS ARE TO BE A MINIMUM OF 1 FOOT WITH ONLY ONE EXTENSION PER VALVE. THE OPERATOR NUT EXTENSION SHALL EXTEND INTO THE TOP SECTION OF THE VALVE BOX AND SHALL CLEAR THE BOTTOM OF THE LID BY A MINIMUM OF 10 INCHES. SEE STANDARD DETAILS.

CITY'S SERVICE CONNECTIONS:

- ALL SERVICE CONNECTIONS RELATING TO NEW DEVELOPMENT SHALL BE INSTALLED BY THE CONTRACTOR AT THE TIME OF MAINLINE CONSTRUCTION. AFTER THE LINES HAVE BEEN CONSTRUCTED, TESTED, APPROVED, AND A LETTER OF ACCEPTANCE HAS BEEN ISSUED, THE CONTRACTOR MAY APPLY FOR A WATER METER. THE CITY WILL INSTALL A WATER METER AFTER THE APPLICATION HAS BEEN MADE AND ALL APPLICABLE FEES HAVE BEEN PAID. WATER METERS WILL BE SET ONLY AFTER THE SYSTEM IS INSPECTED AND APPROVED.
- WHEN WATER IS DESIRED TO A PARCEL FRONTING AN EXISTING MAIN, BUT NOT SERVED BY AN EXISTING METER, AN APPLICATION MUST BE MADE TO THE CITY. UPON APPROVAL OF THE APPLICATION AND PAYMENT OF ALL APPLICABLE FEES, THE CITY WILL ALLOW TAPPING OF THE MAIN, AND INSTALLATION OF THE METER, BOX, AND SETTER.
- SEE STANDARD CITY OF CARNATION DETAILS FOR CORP STOP REQUIREMENTS, SHEET C7.10 AND C7.20.
- ALL JOINTS WITH PLASTIC PIPE SHALL BE MADE UTILIZING STAINLESS STEEL INSERTS WITH COUPLINGS OR ADAPTERS.
- SERVICE CONNECTIONS FOR ANY SERVICE SHALL BE INSTALLED WITH ROMAC OR APPROVAL EQUAL PIPE SADDLES. THE MINIMUM ACCEPTABLE TAP SIZE SHALL BE 1 INCH.
- SERVICE SADDLE SHALL BE ROMAC 202BS, ALL BRONZE WITH STAINLESS STRAPS AND (IP) THREAD OR APPROVED EQUAL. ALL CLAMPS SHALL HAVE RUBBER GASKET AND IRON PIPE THREADED OUTLETS.
- SERVICE LINES SHALL BE POLYETHYLENE MEETING THE REQUIREMENTS OF AWWA C901, WITH HIGH MOLECULAR MASS WITH AT LEAST 200 PSI RATING, AND HAVE A 16 GAUGE COPPER TRACER WIRE WRAPPED ALONG ITS ENTIRE LENGTH (ONE WRAP PER FOOT).
- 1" POLYETHYLENE TUBING SHALL BE IRON PIPE SIZE (IPS) - ID ASTM D2239 - SDR 7 (PE 3408).
- METER SETTERS (1 INCH AND SMALLER) SHALL BE 12 INCHES IN HEIGHT WITH HORIZONTAL INLET AND OUTLET, DOUBLE PURPOSE COUPLINGS, UNLESS OTHERWISE SPECIFIED, ANGLE BALL VALVE WITH DRILLED WINGS FOR PADLOCK, AND ANGLE CHECK VALVE FOR THE SIZE METER TO BE INSTALLED, PER THE STANDARD DETAIL.
- MID-STATES HDPE METER BOX SHALL BE COMPLETE WITH LID AS SPECIFIED IN THE STANDARD DETAILS.
- ANY PLUMBING IN A RESIDENTIAL OR NONRESIDENTIAL FACILITY PROVIDING WATER FOR HUMAN CONSUMPTION, WHICH IS CONNECTED TO A PUBLIC WATER SYSTEM, SHALL BE LEAD FREE. WITH RESPECT TO SOLDER AND FLUX, LEAD FREE SHALL MEAN NO MORE THAN 0.2% LEAD, AND WITH RESPECT TO PIPES AND PIPE FITTINGS NO MORE THAN 8% LEAD.

TURN ON - NEW INSTALLATION FOR OWNER:

- WHEN NEW WATER SERVICE CONNECTIONS ARE INSTALLED BY THE CITY OR DEVELOPER'S CONTRACTOR FOR ANY PREMISES THE VALVE AT THE METER SHALL BE TURNED TO THE "OFF" POSITION AND REMAIN OFF UNTIL A TURN-ON IS APPLIED FOR AND AN ORDER SHALL BE ISSUED BY THE CITY UPON WRITTEN APPLICATION THEREFORE BY THE OWNER OF THE PREMISES TO BE SUPPLIED AFTER INSPECTION AND APPROVAL BY THE CITY, AND AFTER THE CITY PLUMBING INSPECTOR HAS ISSUED A CERTIFICATE THAT ALL PROVISIONS OF THE APPLICABLE PLUMBING CODE HAVE BEEN COMPLIED WITH.

OWNER'S SERVICE PIPE SPECIFICATIONS:

- ALL WATER SERVICE LINE PIPING LEADING FROM THE METER TO THE PREMISES, SHALL BE LAID NOT LESS THAN 18 INCHES BELOW THE SURFACE OF THE GROUND. WATER SERVICE LINE PIPES OR ANY UNDERGROUND WATER PIPES SHALL NOT BE LAID IN THE SAME TRENCH WITH BUILDING SEWER OR DRAINAGE PIPING. WATER SERVICE LINE PIPES, PARALLEL TO BUILDING SEWERS OR DRAINAGE PIPING, SHALL NORMALLY BE ABOVE AND SEPARATED BY A DISTANCE OF AT LEAST TEN FEET HORIZONTALLY, UNLESS OTHERWISE APPROVED BY THE CITY.
- SHUTOFF VALVES OF APPROVED FULL-FLOW PATTERN WITH KEY OR HAND WHEEL SHALL BE INSTALLED IN THE WATER SERVICE PIPE LEADING FROM THE CITY METER TO THE BUILDING, WITHIN THE PREMISES SERVED, IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODE. SHUTOFF VALVES WHERE BURIED SHALL BE PROPERLY ENCLOSED IN A MINIMUM SIX-INCH

- DIAMETER PIPE, OR BOX, OF CONCRETE, PLASTIC, OR IRON WITH AN APPROVED COVER, PROTECTED FROM FREEZING AND READILY ACCESSIBLE. VALVES INTERNAL TO THE STRUCTURE ARE RECOMMENDED.

- CUSTOMER-OWNED VALVES OR EQUIPMENT ARE NOT PERMITTED TO BE INSTALLED WITHIN THE CITY'S METER BOX.

- SERVICE CONNECTIONS AND EXTENSION PIPES LAID UNDERGROUND SHALL BE SIZED IN CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE IBC AS ADOPTED BY THE CITY.

OWNER'S PLUMBING SPECIFICATIONS:

- ALL PERSONS INSTALLING FIXTURES OR APPLIANCES TO BE SUPPLIED WITH WATER FROM THE CITY SYSTEM SHALL BE SUBJECT TO THE REQUIREMENTS OF THE APPLICABLE PLUMBING CODE OF THE CITY. PERSONS INSTALLING PLUMBING IN NEW BUILDINGS SHALL LEAVE THE VALVE AT THE METER IN THE OFF POSITION UPON COMPLETION OF THEIR WORK. THE CITY SHALL HAVE THE RIGHT TO REFUSE WATER SERVICE OR DISCONTINUE WATER SERVICE IN ANY SITUATION WHERE IT IS DISCOVERED THAT APPLICABLE CITY STANDARDS AND CODES HAVE NOT BEEN COMPLIED WITH IN MAKING THE INSTALLATION.

IRRIGATION SYSTEM SPECIFICATIONS:

- AN IRRIGATION SYSTEM CONNECTED TO A DOMESTIC, OR COMMERCIAL CONNECTION SHALL BE EQUIPPED WITH AN APPROVED BACKFLOW DEVICE PER APPENDIX A OF THE WSDOH LIST OF APPROVED CROSS CONNECTION CONTROL DEVICES. THE APPROVED DEVICE SHALL BE PLACED AT A HEIGHT AS PROVIDED IN THE APPLICABLE PLUMBING CODE

BLOWOFF ASSEMBLY:

- IF A FIRE HYDRANT IS NOT LOCATED AT THE END OF A DEAD END MAIN, A BLOWOFF ASSEMBLY SHALL BE REQUIRED. ON WATER MAINS WHICH WILL BE EXTENDED IN THE FUTURE, PROVIDE TEE AND BLOCKING AS SHOWN ON STANDARD DETAILS.

CONCRETE BEDDING AND BLOCKING:

- BEDDING, BLOCKING, ENCASEMENT, OR SLOPE ANCHOR CONCRETE SHALL BE PREMIXED BAGS OF CONCRETE OR CONCRETE MIXED FROM MATERIALS ACCEPTABLE TO THE ENGINEER AND SHALL HAVE A 30-DAY COMPRESSIVE STRENGTH OF NOT LESS THAN 2,500 PSI. THE MIX SHALL CONTAIN FIVE SACKS OF CEMENT PER CUBIC YARD AND SHALL BE OF SUCH CONSISTENCY THAT THE SLUMP IS BETWEEN 1 INCH AND 5 INCHES. ALL CONCRETE SHALL BE MIXED PRIOR TO INSTALLATION.
- CONCRETE THRUST BLOCKING, AS INDICATED ON THE STANDARD DETAILS, SHALL BE PLACED AT BENDS, TEES, DEAD ENDS, CROSSES, AND AS DESIGNATED BY THE ENGINEER.
- LOCATION OF THRUST BLOCKING SHALL BE SHOWN ON PLANS. THRUST BLOCK CONCRETE SHALL BE POURED AGAINST UNDISTURBED EARTH. A PLASTIC BARRIER SHALL BE PLACED BETWEEN ALL THRUST BLOCKS AND FITTINGS. SEE STANDARD DETAILS FOR THRUST BLOCK LOCATIONS AND CALCULATIONS. ALL BLOCKING AS SHOWN ON THE STANDARD DETAILS ARE CONSIDERED AS MINIMUMS, AND CONSIDERATION SHALL BE GIVEN TO UNUSUAL CIRCUMSTANCES SUCH AS UNSTABLE SOIL, ADJACENT PIPE LINES, AND TOPOGRAPHY.

BACKFLOW PREVENTION:

- ALL WATER SYSTEM CONNECTIONS TO SERVE BUILDINGS OR PROPERTIES WITH DOMESTIC POTABLE WATER, FIRE SPRINKLER SYSTEMS, OR IRRIGATION SYSTEMS SHALL COMPLY WITH THE MINIMUM BACKFLOW REQUIREMENTS AS ESTABLISHED BY THE DEPARTMENT OF HEALTH (DOH) AND THE CITY.
- WHEN UTILITY SERVICES OCCUPY THE SAME SPACE AS THE NEW WATER MAIN, THE CONTRACTOR SHALL DO ALL NECESSARY EXCAVATION TO FULLY EXPOSE SUCH SERVICES. THE CONTRACTOR SHALL PROTECT SAID SERVICES AND WORK AROUND THEM DURING EXCAVATING AND PIPE LAYING OPERATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES TO THE SERVICES DUE TO HIS OPERATION AND SHALL IMMEDIATELY NOTIFY THE CITY AND OTHER UTILITY AND ARRANGE FOR REPLACEMENT OF ALL DAMAGED SERVICES.

- THE CONTRACTOR SHALL MAINTAIN A MINIMUM OF 18 INCHES OF VERTICAL SEPARATION AND 10 FEET OF HORIZONTAL SEPARATION BETWEEN SANITARY SEWERS AND WATER MAINS. THE MINIMUM COVER FOR WATER MAIN OF 42 INCHES MAY BE REDUCED TO 30 INCHES UPON APPROVAL BY THE CITY TO PROVIDE FOR AS MUCH VERTICAL SEPARATION AS POSSIBLE.

- THE LONGEST STANDARD LENGTH OF WATER PIPE SHALL BE INSTALLED SO THAT THE JOINTS WILL FALL EQUIDISTANT FROM ANY SEWER CROSSING. IN SOME CASES WHERE MINIMUM SEPARATION CANNOT BE MAINTAINED, IT MAY BE NECESSARY TO ENCASE THE WATER PIPE AND/OR SEWER SERVICE IN A CARRIER PIPE OR CONTROL DENSITY FILL. NO CONCRETE SHALL BE INSTALLED UNLESS SPECIFICALLY DIRECTED BY THE CITY.

- THE MINIMUM STAKING OF WATERLINES SHALL BE AS DIRECTED BY THE CITY OR AS FOLLOWS:

- STAKE CENTERLINE ALIGNMENT EVERY 50 FEET WITH CUT OR FILL TO INVERT OF PIPE MAINTAINING 42 INCHES OF COVER OVER PIPE. CUTS ARE NORMALLY NOT REQUIRED WHEN ROAD GRADE HAS BEEN BUILT TO SUBGRADE ELEVATION.
- STAKE ALIGNMENT OF ALL FIRE HYDRANTS, TEES, WATER METERS, SETTERS AND OTHER FIXTURES AND MARK CUT OR FILL TO HYDRANT FLANGE FINISHED GRADE.

MINIMUM COVER:

- MINIMUM COVER FOR ALL WATER MAINS FROM TOP OF PIPE TO FINISH GRADE SHALL BE 36 INCHES FOR ALL PIPES 8 INCHES DIAMETER AND SMALLER, AND 48 INCHES FOR ALL PIPES GREATER THAN 8 INCHES DIAMETER, AND MAXIMUM DEPTH OF 60 INCHES, UNLESS OTHERWISE APPROVED BY THE CITY.

- THE INSTALLATION OF ALL WATER MAINS AND APPURTENANCES SHALL BE IN ACCORDANCE WITH THE CONSTRUCTION PLANS AS APPROVED BY THE CITY FOR THE PROJECT. ANY DEVIATION OR CHANGES ARE TO BE APPROVED BY THE CITY BEFORE THE CHANGES ARE INCORPORATED INTO THE WORK.

- DIRT OR OTHER FOREIGN MATERIAL SHALL BE PREVENTED FROM ENTERING THE PIPE OR PIPE JOINT DURING HANDLING OR LAYING OPERATIONS, AND ANY PIPE OR FITTING THAT HAS BEEN INSTALLED WITH DIRT OR FOREIGN MATERIAL IN IT SHALL BE REMOVED, CLEANED, AND RE-LAID. WHEN PIPE LAYING IS NOT IN PROGRESS, THE OPEN ENDS OF THE PIPE SHALL BE CLOSED BY WATERTIGHT PLUGS OR BY OTHER MEANS APPROVED BY THE CITY.

- PIPE SHALL BE STACKED IN SUCH A MANNER AS TO PREVENT DAMAGE TO THE PIPE, TO PREVENT DIRT AND DEBRIS FROM ENTERING THE PIPE, AND TO PREVENT ANY MOVEMENT OF THE PIPE. THE BOTTOM TIERS OF THE STACK SHALL BE KEPT OFF THE GROUND ON TIMBERS, OR OTHER SIMILAR SUPPORTS.

- CUTTING PIPE - WHENEVER IT BECOMES NECESSARY TO CUT A LENGTH OF PIPE, THE CUT SHALL BE MADE BY ABRASIVE SAW OR BY PIPE CUTTER. ALL PIPE ENDS SHALL BE SQUARE WITH THE LONGITUDINAL AXIS OF THE PIPE AND THE OUTSIDE SHALL BE BEVELED AND OTHERWISE SMOOTHED SO THAT GOOD CONNECTIONS CAN BE MADE WITHOUT DAMAGE TO THE GASKET. THREADS SHALL BE CLEANLY CUT. OXYACETYLENE TORCH CUTTING OF DUCTILE IRON WILL NOT BE ALLOWED.

PIPE BEDDING:

- PIPE BEDDING MATERIAL, SHALL BE CRUSHED SURFACING TOP COURSE C5TC PER WSDOT STD. SPEC. SECTION 9-03.9(3). BEDDING IS DEFINED AS 6 INCHES BELOW THE PIPE, AROUND THE PIPE, AND 12 INCHES ABOVE THE PIPE.
- THE AMOUNT OF DEFLECTION AT EACH PIPE JOINT WHEN PIPE IS LAID ON A HORIZONTAL OR VERTICAL CURVE SHALL NOT EXCEED HALF THE MANUFACTURER'S PRINTED MAXIMUM RECOMMENDED DEFLECTIONS. WHERE FIELD CONDITIONS REQUIRE DEFLECTION OR CURVES NOT ANTICIPATED IN THE DRAWINGS, THE ENGINEER WILL DETERMINE THE METHODS TO BE USED. WHEN RUBBER GASKETED PIPE IS LAID ON A CURVE, THE PIPE SHALL BE JOINTED IN A STRAIGHT ALIGNMENT AND THEN DEFLECTED TO THE CURVED ALIGNMENT. TRENCHES SHALL BE MADE WIDER ON CURVES FOR THIS PURPOSE.

C:\Temp\kcpublish_1075561.dwg 02.00 CR:cmg

Jun 06, 2023 - 9:20am RossC

NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD	DESIGNED BY WTJ
CHECKED BY WTJ	APPROVED BY JSF
DATE 12/22/2022	
JOB No. :2000639	

CALL TWO BUSINESS DAYS BEFORE YOU DIG
1-800-424-5555

SCALE:
AS NOTED

kpff
1601 5th Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
www.kpff.com

06/06/2023

<p>TOLT PLACE CARNATION, WASHINGTON</p> <p>GENERAL NOTES</p>	<p>SHEET</p> <p>C0.03</p>
--	----------------------------------

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.

CITY OF CARNATION GENERAL WATER NOTES (CONTINUED)

HYDROSTATIC PRESSURE TESTS:

60. THE CITY OR ITS REPRESENTATIVE WILL INSPECT AND OBSERVE THE HYDROSTATIC TEST OF THE PIPE WITHIN 48 HOURS AFTER NOTIFICATION BY THE CONTRACTOR THAT A SECTION IS READY FOR INSPECTION AND TEST. THE CONTRACTOR SHALL CONTACT THE CITY AT LEAST 48 HOURS IN ADVANCE OF THE COMPLETION OF STERILIZATION AND FLUSHING AND THE CITY WILL TAKE THE REQUIRED WATER SAMPLES. THE OWNER OR CONTRACTOR SHALL PAY FOR THE COST OF THE WATER QUALITY TESTS.

61. PRIOR TO THE ACCEPTANCE OF THE WORK, THE INSTALLATION SHALL BE SUBJECT TO A HYDROSTATIC PRESSURE TEST AND ANY LEAKS OR IMPERFECTIONS DEVELOPING UNDER SAID PRESSURE SHALL BE REMEDIATED BY THE CONTRACTOR BEFORE FINAL ACCEPTANCE OF THE WORK. THE CONTRACTOR SHALL PERFORM A PRELIMINARY TEST TO ASSURE THAT THE EQUIPMENT TO BE USED FOR THE TEST IS ADEQUATE AND IN GOOD OPERATING CONDITION AND THE AIR IN THE LINES HAS BEEN RELEASED BEFORE REQUESTING THE CITY WITNESS THE TEST. THE CITY OR HIS REPRESENTATIVE SHALL WITNESS THE TEST; IF THE TEST DOES NOT PASS INSPECTION FOR ANY REASON, ADDITIONAL TRIPS REQUIRED TO WITNESS THE TEST SHALL BE DONE AT THE CONTRACTOR'S EXPENSE.

62. NO AIR WILL BE ALLOWED IN THE LINES. THE MAINS SHALL BE TESTED BETWEEN VALVES. INsofar AS POSSIBLE, NO HYDROSTATIC PRESSURE SHALL BE PLACED AGAINST THE OPPOSITE SIDE OF THE VALVE BEING TESTED. TEST PRESSURE SHALL BE MAINTAINED WHILE THE ENTIRE INSTALLATION BEING TESTED IS INSPECTED. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY EQUIPMENT AND SHALL PERFORM ALL WORK CONNECTED WITH THE TEST. TESTS SHALL BE MADE BEFORE ALL VALVED CONNECTIONS HAVE BEEN MADE. AT UNVALVED CONNECTION POINTS, A TEMPORARY PLUG (OR 2" BLOW-OFF ASSEMBLY ON LINES WITHOUT HYDRANTS) SHALL BE INSTALLED AT THE END OF THE NEW MAIN. THIS SHALL INCLUDE CONCRETE BLOCKING AND/OR RESTRAINED JOINTS NECESSARY TO WITHSTAND PRESSURES ENCOUNTERED DURING THE HYDROSTATIC TEST.

63. ONCE THE NEW LINE IS SUCCESSFULLY TESTED AND DISINFECTED, THE PLUG (BLOW-OFF) SHALL BE REMOVED AND THE CONNECTION TO THE EXISTING MAIN COMPLETED.

64. THE CONTRACTOR SHALL PROVIDE SPECIAL PLUGS AND BLOCKING NECESSARY IN THOSE LOCATIONS WHERE IT WOULD BE NECESSARY TO TEST AGAINST BUTTERFLY VALVES TO ENSURE THAT THE PRESSURE RATING OF THESE VALVES IS NOT EXCEEDED DURING TESTING.

65. ALL WATER MAINS AND APPURTENANCES SHALL BE HYDROSTATICALLY TESTED AS SPECIFIED IN THE STANDARD SPECIFICATIONS.

STERILIZATION AND FLUSHING OF WATER MAINS:

66. STERILIZATION OF WATER MAINS SHALL BE ACCOMPLISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE STATE HEALTH DEPARTMENT AND IN A MANNER SATISFACTORY TO THE CITY. THE SECTION TO BE STERILIZED SHALL BE THOROUGHLY FLUSHED AT MAXIMUM FLOW ESTABLISHED BY THE CITY PRIOR TO CHLORINATION, NO LESS THAN 2.5 FT/S. FLUSHING PERIOD MUST BE APPROVED BY THE CITY. SECTIONS WILL ORDINARILY BE STERILIZED BETWEEN ADJACENT VALVES UNLESS, IN THE OPINION OF THE CITY, A LONGER SECTION MAY BE SATISFACTORILY HANDLED. CHLORINE SHALL BE APPLIED BY SOLUTION FEED AT ONE END OF THE SECTION WITH A VALVE OR HYDRANT AT THE OPPOSITE END OPEN SUFFICIENTLY TO PERMIT A FLOW THROUGH DURING CHLORINE APPLICATION. THE CHLORINE SOLUTION SHALL BE FED INTO THE PIPELINE ALREADY MIXED BY AN AUTOMATICALLY PROPORTIONING APPLICATOR SO AS TO PROVIDE A STEADY APPLICATION RATE OF NOT LESS THAN 50 PPM CHLORINE. HYDRANTS ALONG THE CHLORINATED SECTION SHALL BE OPEN DURING APPLICATION UNTIL THE PRESENCE OF CHLORINE HAS DEFINITELY BEEN DETECTED IN EACH HYDRANT RUN. WHEN A CHLORINE CONCENTRATION OF NOT LESS THAN 50 PPM HAS BEEN ESTABLISHED THROUGHOUT THE LINE, THE VALVES SHALL BE CLOSED AND THE LINE LEFT UNDISTURBED FOR 24 HOURS MINIMUM CONTACT TIME.

67. AS AN ALTERNATIVE, THE CONTRACTOR MAY USE GRANULATED CHLORINE. GRANULATED CHLORINE (DRY CALCIUM HYPOCHLORITE AT 65% - 70% CHLORINE) SHALL BE PLACED IN THE PIPE TO YIELD A DOSAGE OF NOT LESS THAN 50 PPM. THE NUMBER OF OUNCES OF 65% TEST CALCIUM HYPOCHLORITE REQUIRED FOR A 20-FOOT LENGTH OF PIPE EQUALS .00843xD, IN WHICH "D" IS THE DIAMETER IN INCHES. THE LINE SHALL THEN BE THOROUGHLY FLUSHED AND WATER SAMPLES TAKEN FOR APPROVAL BY THE LOCAL HEALTH AGENCY. FLUSHING PERIOD MUST BE APPROVED BY THE CITY. THE CONTRACTOR SHALL EXERCISE SPECIAL CARE IN FLUSHING TO AVOID DAMAGE TO SURROUNDING PROPERTY.

68. SHOULD THE INITIAL TREATMENT RESULT IN AN UNSATISFACTORY BACTERIOLOGICAL TEST, ADDITIONAL CHLORINE USING THE FIRST PROCEDURE SHALL BE REPEATED BY THE CONTRACTOR UNTIL SATISFACTORY RESULTS ARE OBTAINED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF TREATED WATER FLUSHED FROM MAINS AND AT NO TIME SHALL CHLORINATED WATER FROM A NEW MAIN BE FLUSHED INTO A BODY OF FRESH WATER. THIS IS TO INCLUDE LAKES, RIVERS, STREAMS, STORM DRAINAGE SYSTEMS AND ANY AND ALL OTHER WATERS WHERE FISH OR OTHER NATURAL WATER LIFE CAN BE EXPECTED.

69. DECHLORINATION OF THE TREATED WATER THAT IS FLUSHED FROM THE MAIN IS REQUIRED. ALLOWABLE CHEMICALS ARE ASCORBIC ACID OR OTHER CHEMICAL APPROVED BY THE CITY.

70. MAIN EXTENSIONS SHALL NOT BE CONNECTED TO THE CITY WATER SYSTEM UNTIL PRESSURE AND BACTERIOLOGICAL TESTS HAVE PASSED ALL REQUIRED STANDARDS.

CIVIL ABBREVIATIONS

APPROX	APPROXIMATELY
AVE	AVENUE
BLA	BOUNDARY LINE ADJUSTMENT
BMP	BEST MANAGEMENT PRACTICE
CB	CATCH BASIN
CL	CENTERLINE
CP	CONTROL POINT
CRZ	CRITICAL ROOT ZONE
CSBC	CRUSHED SURFACING BASE COURSE
CSTC	CRUSHED SURFACING TOP COURSE
Ø, DIAM	DIAMETER
DI	DUCTILE IRON
DOE	DEPARTMENT OF ECOLOGY
EL, ELEV	ELEVATION
EX	EXISTING
FG	FINISHED GRADE
FL	FLANGE
FT	FEET
GA	GAUGE
GV	GATE VALVE
H	HORIZONTAL
HMA	HOT MIX ASPHALT
ICRZ	INTERIOR CRITICAL ROOT ZONE
IE	INVERT ELEVATION
LF	LINEAR FEET
LT	LEFT
MAX	MAXIMUM
MIN	MINIMUM
MJ	MECHANICAL JOINT
NTS	NOT TO SCALE
PC	POINT OF CURVATURE
PERF	PERFORATED
PSE	PUGET SOUND ENERGY
PG	PERFORMANCE GRADE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS
ROW	RIGHT OF WAY
RT	RIGHT
SCH	SCHEDULE
SD	STORM DRAIN
SDCO	STORM DRAIN CLEANOUT
SDR	STANDARD DIMENSION RATIO
SF	SQUARE FEET
SS	SANITARY SEWER
STA	STATION
STD	STANDARD
SW	SIDEWALK
TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
TYP	TYPICAL
V	VERTICAL
VP	VALVE PIT
W	WATER
WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

C:\Temp\kcpublish\10756\CD 00.00 CR.dwg Jun 06, 2023 - 9:20am RossG

NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD	DESIGNED BY WTJ
CHECKED BY WTJ	APPROVED BY JSF
DATE 12/22/2022	
JOB No. :2000639	

CALL TWO BUSINESS DAYS BEFORE YOU DIG
1-800-424-5555

SCALE:
AS NOTED

kpff

1601 5th Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
www.kpff.com

TOLT PLACE
CARNATION, WASHINGTON

GENERAL NOTES & CIVIL ABBREVIATIONS

SHEET
CO.04

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.

CITY OF CARNATION GENERAL SANITARY SEWER NOTES

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF CARNATION WATER AND SEWER COMBINED UTILITY STANDARDS, CURRENT EDITION, UNLESS OTHERWISE NOTED.
 - PRIOR TO ANY PAVEMENT CUTTING OR REMOVAL, OR EXCAVATION FOR PIPE LAYING, THE CONTRACTOR SHALL VERIFY, IN THE PRESENCE OF THE CITY'S INSPECTOR, THE LOCATION AND DEPTH OF THE EXISTING SEWER MAIN AT THE POINT WHERE CONNECTION IS TO BE MADE. THE CONTRACTOR SHALL VERIFY THE DIMENSIONS, TYPE, AND CONDITION OF THE EXISTING SEWER MAIN. IF NECESSARY, THE GRADE SHALL BE ADJUSTED SO NEITHER A HIGH SPOT NOR A LOW SPOT IS CREATED ADJACENT TO THE CONNECTION TO THE EXISTING SEWER MAIN.
 - WATER MAINS, PARALLEL TO A SEWER, SHALL NORMALLY BE ABOVE AND SEPARATED BY A DISTANCE OF AT LEAST TEN FEET HORIZONTALLY. UNDER UNUSUAL CIRCUMSTANCES, THE HORIZONTAL SPACING MAY BE ADJUSTED, SUBJECT TO THE APPROVAL OF THE CITY. WATER MAINS CROSSING SEWERS SHOULD BE NOT LESS THAN 18 INCHES ABOVE THE SEWER. WHERE IT IS NECESSARY FOR A SEWER TO CROSS WITHIN 18 INCHES, OR OVER THE WATER MAIN, PROTECTIVE MEASURES PER THE DOE CRITERIA FOR SEWAGE WORKS DESIGN (ORANGE BOOK) SHALL BE TAKEN.
 - FIELD STAKING FOR SEWER LINE AND GRADE FOR SEWER VACUUM BRANCH MAIN AND VACUUM SEWER LATERALS SHALL BE PERFORMED BY LICENSED SURVEYOR.
 - PIPING, VALVES, VALVE PITS, AND APPURTENANCES SHALL NOT BE BURIED UNTIL OBSERVED AND ACCEPTED BY CITY REPRESENTATIVE. CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING AND SCHEDULING TIMELY SITE OBSERVATIONS BY CITY REPRESENTATIVE.
 - TRENCHES SHALL BE EXCAVATED TO THE LINE AND DEPTH DESIGNATED BY THE PLANS TO PROVIDE THE COVER ON THE WATER SYSTEM OR SANITARY SEWER SYSTEM AS SPECIFIED BY THE CITY. PERFORM TRENCHING IN ACCORDANCE WITH THE GENERAL UTILITY PIPE TRENCHING AND TRENCH PATCHING NOTES ON SHEET C8.20.
 - THE CITY HAS A VACUUM SEWER SYSTEM THAT OPERATES DIFFERENTLY THAN STANDARD GRAVITY SEWER. A BREAK IN THE MAINLINE, OR BETWEEN MAINLINE AND VALVE PITS, WILL SHUTDOWN THE ENTIRE TRUNKLINE, BETWEEN VACUUM STATION AND END USER. THE INSTALLATION OF ALL SANITARY SEWER FACILITIES SHALL BE DONE PER PLANS WHICH HAVE BEEN APPROVED BY THE CITY.
 - BEFORE INSTALLATION, MATERIAL SUBMITTALS SHALL BE SUBMITTED TO THE CITY ENGINEER FOR ACCEPTANCE FOR ALL MATERIALS TO BE INSTALLED. ALL MATERIALS SHALL BE NEW AND UNDAMAGED. ALL MATERIALS NOT SPECIFICALLY REFERENCED SHALL COMPLY WITH APPLICABLE SECTIONS OF ANSI, ASTM, AWWA, AND THE STANDARD SPECIFICATIONS.
 - APPROVED MANUFACTURERS AND MODEL NUMBERS OF VARIOUS MATERIALS ARE LISTED IN APPROVED MATERIALS LIST INCLUDED IN THE CITY STANDARDS. WHEN SPECIFIC MANUFACTURERS OR MODELS ARE LISTED, NO SUBSTITUTIONS WILL BE ALLOWED WITHOUT PRIOR APPROVAL BY THE CITY.
- PIPE
- VACUUM SEWER MAIN AND LATERALS SHALL BE CONSTRUCTED OF ASTM 2241 SDR 21 PVC, 200 PSI PRESSURE RATED, UNLESS OTHERWISE APPROVED BY CITY.
 - CONNECTIONS TO EXISTING VACUUM SEWER MAIN SHALL BE MADE WITH ROMAC 501 COUPLINGS OR APPROVED EQUAL.
 - GRAVITY SEWERS AND SERVICES SHALL BE CONSTRUCTED OF ASTM 2241 SDR 21 PVC, ASTM 3034 SDR 35 PVC, OR CLASS 50 DUCTILE IRON PIPE CONFORMING TO SECTION 9-05.12 OF THE STANDARD SPECIFICATIONS UNLESS SHOWN OTHERWISE ON DRAWINGS. PVC GRAVITY SEWER SERVICE PIPE SHALL BE CONSIDERED FLEXIBLE CONDUIT. PVC COMPOUND SHALL MEET THE REQUIREMENTS OF ASTM D 1784 FOR CLASS 12454-B PVC. VENT PIPES SHALL BE PVC SDR 21 OR SCHEDULE 40 PVC WITH SOLVENT WELD JOINTS AS SHOWN ON THE STANDARD DETAIL. INSTALLATION OF TRACER TAPE OR WIRE OVER THE SIDE SEWER IS REQUIRED.
 - DUCTILE IRON PIPE (CLASS 50) MAY BE USED IN LIEU OF PVC PIPE PROVIDED THE DUCTILE IRON PIPE IS LINED WITH PROTECTO 401 CERAMIC-EPOXY OR APPROVED EQUAL. ALL LININGS SHALL BE APPLIED PER THE MANUFACTURER'S RECOMMENDATIONS.
 - THE INTERIOR OF THE PIPE SHALL BE KEPT CLEAN AND FREE FROM DIRT, CEMENT, OR ANY OTHER SUPERFLUOUS, AND EACH JOINT LEFT ENTIRELY FREE FROM ANY PROTRUDING MATERIAL ON THE INSIDE OF THE PIPE JOINT OR PIPE BARREL.

- COUPLINGS
- ONLY ROMAC, FERNCO COUPLINGS OR FORD FLEXIBLE COUPLINGS MAY BE USED. FERNCO COUPLINGS ARE ONLY ALLOWED AT THE BUILDING CONNECTION TO THE SIDE SEWER, NOT AT THE CONNECTION TO THE CITY SIDE SEWER. THEY SHALL BE INSTALLED AS PRESCRIBED BY THE MANUFACTURER OF THE COUPLING, AND IN A MANNER SATISFACTORY TO THE CITY.
- WYES, TEES AND CLEANOUTS
- CLEANOUTS SHALL BE REQUIRED FOR ALL SIDE SEWERS LONGER THAN 100 FEET AS MEASURED FROM THE OWNER'S PROPERTY OR EASEMENT LINE AND THE BUILDING FOUNDATION. CLEANOUTS SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED 100 FEET AND ARE ENCOURAGED AT CHANGES OF PIPE ALIGNMENT.
 - WYES AND CLEANOUTS SHALL BE PLACED AT ANY LOCATION OR LOCATIONS WHICH, IN THE CITY'S OPINION, ARE REASONABLY NECESSARY TO ASSURE A PROPER INSTALLATION.
 - ALL WYES TO BE INSTALLED FOR USE AS A PERMANENT CLEANOUT, AND ALL TEMPORARY OR FUTURE ENDS OF RUNS SHALL BE PLUGGED WITH A PLUG OF A TYPE SATISFACTORY TO THE CITY AND SHALL BE MADE COMPLETELY WATERTIGHT. IT IS THE INSTALLER'S RESPONSIBILITY TO ASSURE THAT SUCH PLUG WILL NOT BE BLOWN OUT OR MOVED BY THE TESTING PRESSURE IN THE SEWER SYSTEM. ANY SUCH MEANS OF PREVENTION SHALL BE EASILY REMOVABLE WITHOUT DAMAGE TO THE FITTING OR THE PLUG.
 - NO SIDE SEWER SHALL BE COVERED OR BACKFILLED PRIOR TO THE FIELD INSPECTION BY THE CITY. ANY PERSON PERFORMING WORK SUBJECT TO THE PROVISIONS OF THIS POLICY SHALL NOTIFY THE CITY AS LEAST FORTY EIGHT (48) HOURS IN ADVANCE OF WHEN THE WORK WILL BE READY FOR INSPECTION AND TESTING, AND AN APPOINTMENT WILL BE ARRANGED FOR THE INSPECTION. THE OWNER OR CONTRACTOR MUST BE PRESENT DURING THE INSPECTION. IF AN APPOINTMENT HAS BEEN SCHEDULED AND THE INSPECTOR ARRIVES AND FINDS THAT, IN FACT, THE SIDE SEWER IS NOT READY FOR TESTING AND INSPECTION, A NEW APPOINTMENT MUST BE MADE AND A CHARGE MADE FOR THE SECOND VISIT AS ESTABLISHED BY THE CITY.
- BENDS
- BENDS USED FOR VACUUM LINE DIRECTIONAL CHANGES, BRANCH TO MAIN CONNECTIONS, AND VALVE PIT TO BRANCH OR MAIN CONNECTIONS MAY NOT EXCEED 45 DEGREES. FITTINGS SHALL BE CONSTRUCTED OF ASTM 2241 SDR21 UNLESS OTHERWISE APPROVED BY CITY.
- VALVES
- GATE VALVES USED FOR VACUUM SEWER SYSTEM SHALL CONFORM TO ANSI/AWWA C509-94, STANDARD FOR RESILIENT SEATED GATE VALVES, AS MANUFACTURED BY MUELLER OR M&H.
 - MECHANICAL JOINT CONNECTIONS WITH TRANSITION TO PVC GASKETS SHALL BE PROVIDED. ALL FLANGE FACES SHALL BE MACHINED AND DRILLED TO STRADDLE THE VERTICAL CENTERLINE
 - BURIED VALVES SHALL BE PROVIDED WITH VALVE BOXES AND THE OPERATING NUT SHALL BE EXTENDED TO WITHIN 9", PLUS OR MINUS 6", OF THE FINISHED GRADE. THE VALVE BOX COVER SHALL HAVE THE WORDS "SEWER" AND "OPEN" WITH A DIRECTIONAL ARROW CAST ON IT. LOCK DOWN SET SCREWS SHALL NOT BE USED ON VALVE OPERATING NUT EXTENSIONS
 - TWO (2) TEE KEYS SHALL BE PROVIDED FOR EACH VALVE SIZE REQUIRED.
- VALVE PIT
- SHALL BE AS MANUFACTURED BY BILFINGER/AIR VAC, MODEL TO BE SPECIFIED ON DRAWINGS.
 - VALVE PIT COVERS SHALL BE MODEL R5900 BY NEENAH FOUNDRY OR EQUAL, AND SHALL BE DESIGNED FOR H-20 LOADING. CASTINGS SHALL MEET ASTM A-48, CLASS 30 GRAY CAST IRON. COVERS SHALL BEAR THE NAME "AIRVAC SEWER" ON ITS TOP IN 1" TALL RAISED LETTERS, UNLESS OTHERWISE DIRECTED BY CITY. RISER RINGS ARE NOT TO BE USED ON VALVE PITS UNLESS PRIOR APPROVAL IS OBTAINED FROM CITY.
 - VALVE PITS SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTION.
 - AN ELASTOMER SEAL/GROMMET SHALL BE PROVIDED FOR EACH PIPE PASSING THROUGH VALVE PIT, VALVE PIT BOTTOM AND SUMP TO PROVIDE A SEAL AGAINST GROUND WATER WITHOUT THE USE OF THREADED FASTENERS. IF THE VALVE PIT IS PROVIDED WITH AN INTEGRAL PLAIN END PORTION OF PIPE, THE GRAVITY SEWER TO VALVE PIT CONNECTION SHALL BE MADE USING A STANDARD GASKETED BELL END CONNECTION.

- VALVE PIT BEDDING & BACKFILL
- VALVE PITS SHALL BE FOUNDED ON A 3" LAYER OF CRUSHED SURFACING TOP COURSE (CSTC) PER WSDOT STD. SPEC. SECTION 9-03.9(3) AND BACKFILLED WITH CSTC PER SAME STANDARD OR SAND PER WSDOT STD. SPEC. SECTION 9-03.13(1) OR CSTC. ALL VALVE PITS WITHIN ROW SHALL HAVE TOP 12" BACKFILLED WITH CRUSHED SURFACING BASE COURSE (CSBC) PER WSDOT STD. SPEC. SECTION 9-03.9(3). VALVE PIT BACKFILL SHALL BE MECHANICALLY COMPACTED TO 90% OF MAXIMUM DENSITY (MODIFIED PROCTOR TEST) AND 95% AT THE UPPER 4 FEET WITHIN THE ROW AND ALL AREAS (PAVED AND UNPAVED) WHERE STREETS, ROADWAY SHOULDERS, DRIVEWAYS, SIDEWALKS, OR PARKING LOTS WILL BE CONSTRUCTED OR RECONSTRUCTED. SPECIAL CARE SHALL BE TAKEN IMMEDIATELY ADJACENT TO VALVE PIT STRUCTURES WHILE COMPACTING AND THE CONTRACTOR SHALL BE LIABLE FOR ANY DAMAGE INCURRED TO VALVE PITS DURING COMPACTING. SEE DETAIL FOR VALVE PIT INSTALLATION.
- VACUUM SYSTEM AIR INTAKE
- EACH BUILDING'S GRAVITY SEWER SERVICE SHALL BE FITTED WITH A 4" AIR VENT OR A 6" AIR TERMINAL SHALL BE PROVIDED FOR EACH VALVE PIT, PER CITY STANDARDS.
- PIPE BEDDING
- PIPE BEDDING MATERIAL, SHALL BE CRUSHED SURFACING TOP COURSE (CSTC) PER WSDOT STD. SPEC. SECTION 9-03.9(3). NATIVE MATERIAL MAY BE USED FOR GRAVITY SIDE SEWER PIPE BEDDING IF IT IS SAND OR SMALL GRAVEL MATERIAL WITH STONES NO LARGER THAN 1 1/2-INCH DIAMETER, ONLY AS APPROVED IN ADVANCE BY THE CITY.
 - HAND SELECTED AND PLACED NATIVE MATERIAL MAY BE USED ONLY IF IT IS FREE OF STONES LARGER THAN 1 1/2 INCHES IN DIAMETER AND IS HAND PLACED AROUND THE PIPE TO AT LEAST 6 INCHES OVER THE TOP OF THE PIPE.
 - IF THE NATIVE MATERIAL IS NOT SUITABLE FOR GRAVITY SEWER PIPE BEDDING, THE IMPORTED PIPE BEDDING SHALL BE 5/8-INCH CRUSHED SURFACING. THE TOP OF THE PIPE AND ALL FITTINGS SHALL REMAIN EXPOSED FOR INSPECTION. THE LOWER PORTION OF THE BEDDING TO THE SPRING LINE SHALL BE COMPLETED BEFORE INSPECTION OR TESTING OF THE SIDE SEWER.
 - WHERE TRENCH BOTTOM IS IN QUICKSAND, MULCH, PEAT OR OTHER UNSTABLE MATERIAL, A STABLE FOUNDATION OF GRAVEL SHALL BE PROVIDED. THE RESPONSIBILITY FOR ADEQUATE PIPE BEDDING WILL REST ENTIRELY WITH THE CONTRACTOR. BEDDING MATERIAL SHALL BE SATISFACTORY TO THE CITY AND SO PLACED AS TO PRECLUDE THE POSSIBILITY OF LARGE ROCKS OR BOULDERS BEARING DIRECTLY AGAINST THE SEWER PIPE.
 - SERVICE CONNECTIONS FROM VALVE PIT TO BRANCH OR MAIN LINES (INCLUDING FLEXIBLE CONNECTOR PIPE) SHALL BE SET ON A COMPACTED BENCH OF BACKFILL MATERIAL CONSISTANT WITH VALE PIT BACKFILL REQUIREMENTS ABOVE. THIS SHALL ENCOMPASS PARTIALLY BACKFILLING THE VALVE PIT PRIOR TO INSTALLING THE SERVICE CONNECTION.
- GRADE AND ALIGNMENT (MINIMUM AND MAXIMUM)
- ALL SIDE SEWERS SHALL BE LAID TO A MINIMUM GRADE OF ONE AND ONE-HALF (1.5)% AND A MAXIMUM GRADE OF 2 FEET VERTICAL TO 1 FOOT HORIZONTAL (200%), UNLESS OTHERWISE EXPLICITLY AUTHORIZED IN WRITING BY THE CITY. SIDE SEWER GRADES OF 2% MINIMUM ARE RECOMMENDED. SIDE SEWERS SHALL BE CONSTRUCTED WITH A MAXIMUM PIPE DEFLECTION OF NOT MORE THAN 2 INCHES PER FOOT. THE MAXIMUM DEFLECTION PERMISSIBLE AT ANY ONE FITTING SHALL NOT EXCEED 45 DEGREES WITH MINIMUM OF 24 INCHES SEPARATION BETWEEN BENDS.
 - A MINIMUM HORIZONTAL SEPARATION OF 10 FEET AND A MINIMUM VERTICAL SEPARATION OF 18 INCHES BETWEEN ALL SEWER LINES AND WATER LINES MUST BE MAINTAINED, PER WASHINGTON DEPARTMENTS OF ECOLOGY'S ORANGE BOOK (2008, OR LATEST EDITION). ANY UNUSUAL CONDITIONS WHICH PREVENT THESE SEPARATIONS SHALL CONFORM TO ALL GUIDELINES WITHIN THE ORANGE BOOK AND SHALL UTILIZE APPLICABLE MITIGATION TECHNIQUES.
- HDPE PIPE AND FITTINGS - FORCE MAINS ONLY
- HDPE PIPING COMPONENTS SHALL BE MANUFACTURED FROM MATERIALS THAT MEET OR EXCEED THE REQUIREMENTS OF THE PLASTIC PIPING INSTITUTE DESIGNATION PE3408 AND THAT CONFORM TO THE REQUIREMENTS OF ASTM D3350 FOR A CELL CLASSIFICATION OF PE 345434C. PIPE MARKING SHALL CONFORM TO THE REQUIREMENTS OF AWWA C906.
 - BOLTS AND NUTS FOR BURIED MECHANICAL JOINING COMPONENTS SUCH AS FLANGES SHALL BE MADE OF NONCORROSIVE, HIGH-STRENGTH, LOW-ALLOY STEEL HAVING THE CHARACTERISTICS SPECIFIED IN ANSI/AWWA C111/A21, REGARDLESS OF ANY PROTECTIVE COATING.
 - PIPE SHALL HAVE THE NOMINAL DIMENSIONS SHOWN WITH AN IPS OUTSIDE

- DIAMETER BASIS AND THE DIMENSIONS AND TOLERANCES SPECIFIED IN AWWA C906. DR RATING SHALL BE 26 AND PRESSURE CLASS SHALL BE 64 PSI.
- FITTINGS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AWWA C906 FOR THE JOINING METHODS SPECIFIED IN THIS SPECIAL PROVISION.
 - FOR PIPE BENDS 14 INCHES AND SMALLER AND WHERE LONG RADIUS BENDS ARE SPECIFIED FOR THE PIPING SYSTEM, PROVIDE ARCTM SWEEP BENDS MANUFACTURED BY PIPESTAR INTERNATIONAL, OR EQUAL. BEND RADIUS SHALL BE THREE TIMES THE PIPE DIAMETER, MEASURED TO THE CENTER LINE OF THE BEND FOR LONG-RADIUS BENDS. FLANGE FITTINGS SHALL BE FLANGE TYPE VR 955.
- SIDE SEWER STUB SERVICE (RIGHT-OF-WAY CONSTRUCTION)
- THE FOLLOWING SPECIFICATIONS ARE IN ADDITION TO THE REQUIREMENT OF ANY STUB SERVICE ROAD CUT PERMIT.

PIPE SIZE	SECONDS PER LINEAL FOOT OF PIPE
4"	1.0
6"	1.5
 - LARGER CHANGES IN DIRECTION SHALL BE MADE BY USE OF STANDARD 11-1/4 DEGREE OR 22-1/2 DEGREE BENDS. NO MORE THAN ONE BEND PER STUB SERVICE WILL BE ALLOWED.
 - GRADE AND ALIGNMENT SHALL BE PER OTHER SECTION OF THESE STANDARDS. EACH SIDE SEWER STUB SHALL TERMINATE WITH A 6 INCH CAP WITHIN 1 FOOT OF THE PROPERTY OR PERMANENT EASEMENT LINE.
 - THE CONTRACTOR MAY ELECT TO EXTEND THE SIDE SEWER STUB BY ONE LENGTH OF SIDE SEWER PIPE. ANY SUCH EXTENSION SHALL NOT EXCEED 12 FEET IN LENGTH FROM A TEE INSTALLED AT THE PROPERTY LINE. THE TEE, WITH A PUSH-IN PLUG, SHALL BE LAID IN SUCH A FASHION THAT THE BRANCH IS VERTICAL. SUCH LENGTH OF SIDE SEWER SHALL TERMINATE WITH A CAP, AND SHALL BE TESTED ALONG WITH THE STUB SERVICE.
 - ALL SIDE SEWER STUBS SHALL BE 6-INCH MINIMUM. COMMERCIAL OR MULTIFAMILY UNITS MAY REQUIRE LARGER SIDE SEWER STUBS AND WILL BE REVIEWED BY THE CITY.
- DIVISION VALVES & GAUGE TAPS
- DIVISION VALVE AND GAUGE TAP INSTALLATION SHALL BE CONSTRUCTED PER CITY STANDARD DETAIL. ALL GATE VALVES AND FITTINGS SHALL BE DUCTILE IRON WITH ANSI MECHANICAL JOINT ENDS. ALL EXISTING VALVES SHALL BE OPERATED BY CITY EMPLOYEES ONLY. THE DESIGN, MATERIALS, AND WORKMANSHIP OF ALL GATE VALVES SHALL CONFORM TO AWWA C515-01 (OR LATEST REVISION). GATE VALVES SHALL BE RESILIENT WEDGE NON-RISING STEM (NRS) WITH TWO INTERNAL O-RING STEM SEALS.
- TESTING SPECIFICATIONS
- VACUUM SEWER MAINS AND FITTINGS
- TESTING OF ALL SEWER MAINS AND LATERAL CONNECTIONS SHALL BE PERFORMED DAILY IN ACCORDANCE TO THE FOLLOWING PROCEDURE:
 - PLUG ALL OPEN CONNECTIONS WITH RUBBER STOPPERS OR TEMPORARY CAPS, FITTED TO THE PIPE BY "NO-HUB" COUPLINGS.
 - APPLY A VACUUM TO 22 INCHES HG TO THE PIPES AND ALLOW THE PRESSURE TO STABILIZE FOR 15 MINUTES.
 - THERE SHALL BE NO LOSS OF VACUUM IN EXCESS OF 1% PER HOUR FOR A TWO-HOUR TEST PERIOD.
 - THERE SHALL BE ABSOLUTELY NO WATER ALLOWED TO BE ADMITTED INTO THE PIPING NETWORK DURING THIS TEST.
 - AS PIPE IS LAID THE NEW SECTION SHALL BE TESTED IN ADDITION TO THE PREVIOUSLY LAID PIPE ON THAT MAIN.
 - THE CONTRACTOR SHOULD LEAVE THE SEWER MAIN PIPE JOINTS UNCOVERED UNTIL AFTER THE DAILY VACUUM TEST IS COMPLETE SO THAT ANY LEAKS CAN BE EASILY LOCATED AND REPAIRED.
 - TESTING MODIFICATIONS MAY BE ALLOWED IF DEEMED APPROPRIATE AND SUFFICIENT BY THE CITY. ALL MODIFICATIONS MUST BE APPROVED BY CITY PRIOR TO USE IN THE FORM OF EXPLICIT WRITTEN CONSENT.
- VACUUM PIPE FLUSHING
- AFTER ACCEPTANCE OF VACUUM TESTING, FLUSH LINES TO REMOVE DEBRIS AND FOREIGN MATERIALS THAT ACCUMULATED IN THE LINES DURING CONSTRUCTION.
- SIDE SEWER TESTING
- PRIOR TO BEING CONNECTED TO THE PREMISES ALL SIDE SEWERS SHALL BE TESTED BY ONE OF THE TWO FOLLOWING METHODS:
 - EXFILTRATION:
 - THE SIDE SEWER SHALL BE FILLED WITH WATER THROUGH A RISER THAT EXTENDS A MINIMUM OF 5 FEET ABOVE FINISHED GRADE AT THE INSTALLATION. THE RISER SHALL BE FILLED WITH WATER AND NO NOTICEABLE DROP IN THE WATER LEVEL SHALL BE ACCEPTED

FOR A PERIOD OF NOT LESS THAN 10 MINUTES OF OBSERVATION. THE RISER MAY DOUBLE AS THE SIDE SEWER VENT PIPE. THE RISER SHALL BE CUT TO THE REQUIRED LENGTH FOR THE VENT PIPE AFTER THE SIDE SEWER PASSES THE EX-FILTRATION TEST.

- AIR TEST
 - ALL EQUIPMENT REQUIRED TO MAKE SUCH TESTS, INCLUDING PLUGS, HOSES, BLOCKING, AIR PUMPS, WATER AND OTHER EQUIPMENT SHALL BE FURNISHED BY THE CONTRACTOR.
- AIR TESTING SHALL MEET THE FOLLOWING REQUIREMENTS:

SIDE SEWER CONNECTIONS

- NO MORE THAN ONE BUILDING MAY BE CONNECTED WITH THE SIDE SEWER UNLESS THE CITY ISSUES AN EXEMPTION FOR MULTIPLE CONNECTIONS. AN EXEMPTION WILL BE ISSUED ONLY UPON THE CONDITION THAT THE PERMITTEE HAS NO OTHER FEASIBLE OPTION BASED ON UTILITY CONFLICTS OR SPACE CONSIDERATIONS OR OTHER TECHNICAL ISSUE THAT PREVENTS INSTALLATION OF SEPARATE SIDE SEWERS. THE PERMITTEE SHALL HOLD THE CITY HARMLESS FROM ANY DAMAGES BY REASON OF SUCH INSTALLATION AND SUBJECT TO THE FOLLOWING REGULATIONS:

COMMON SIDE SEWERS

- TWO HOUSES MAY BE CONNECTED TO A COMMON SIDE SEWER WHEN THE FOLLOWING CONDITIONS ARE MET: (1) AT THE END OF THE COMMON PORTION OF THE JOINT SIDE SEWER A CLEANOUT SHALL BE INSTALLED PER DETAIL FOR JOINT SIDE SEWER CLEANOUT; AND (2) A BACKWATER VALVE SHALL BE INSTALLED ON BOTH HOUSES.

BACKWATER VALVES

- BACKWATER VALVES SHALL BE INSTALLED ON ALL BUILDINGS EXCEPT WHEN WAIVED BY THE CITY. BACKFLOW VALVES MAY BE USED AS THE CLEANOUT BETWEEN THE HOUSE PLUMBING AND SIDE SEWER AS OTHERWISE REQUIRED BY THESE STANDARDS. BACKFLOW VALVES MAY BE EITHER ALTERNATE NO. 1 OR NO 2 AS SHOWN ON THE STANDARD DETAILS.

REQUIRED SIDE SEWER SIZE

- SIDE SEWERS SHALL BE 6" UNLESS OTHERWISE APPROVED BY THE CITY.

Jun 06, 2023 - 9:20am RossC C:\Temp\kcpublish\10756\CD 02.00 CR.dwg

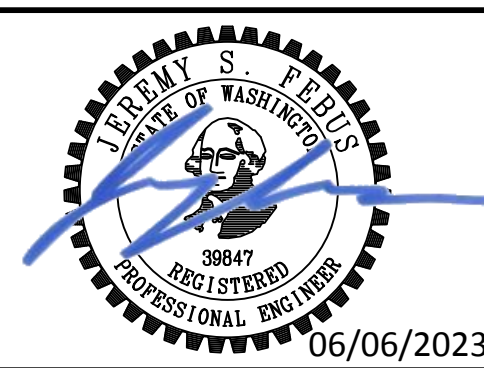
NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD	DESIGNED BY WTJ
CHECKED BY WTJ	APPROVED BY JSF
DATE 12/22/2022	
J O B No. :2000639	

CALL TWO BUSINESS DAYS BEFORE YOU DIG
1-800-424-5555

S C A L E:
AS NOTED

kpff
1601 5th Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
www.kpff.com



TOLT PLACE
CARNATION, WASHINGTON

GENERAL NOTES

SHEET
C0.05

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.

CONSTRUCTION BASELINE NOTES:

- PROPERTY BOUNDARY LINE BEARINGS AND DISTANCES ARE SHOWN FOR REFERENCE ONLY PER SURVEY DATED 01/21/2021 PREPARED BY KPFF CONSULTING ENGINEERS.

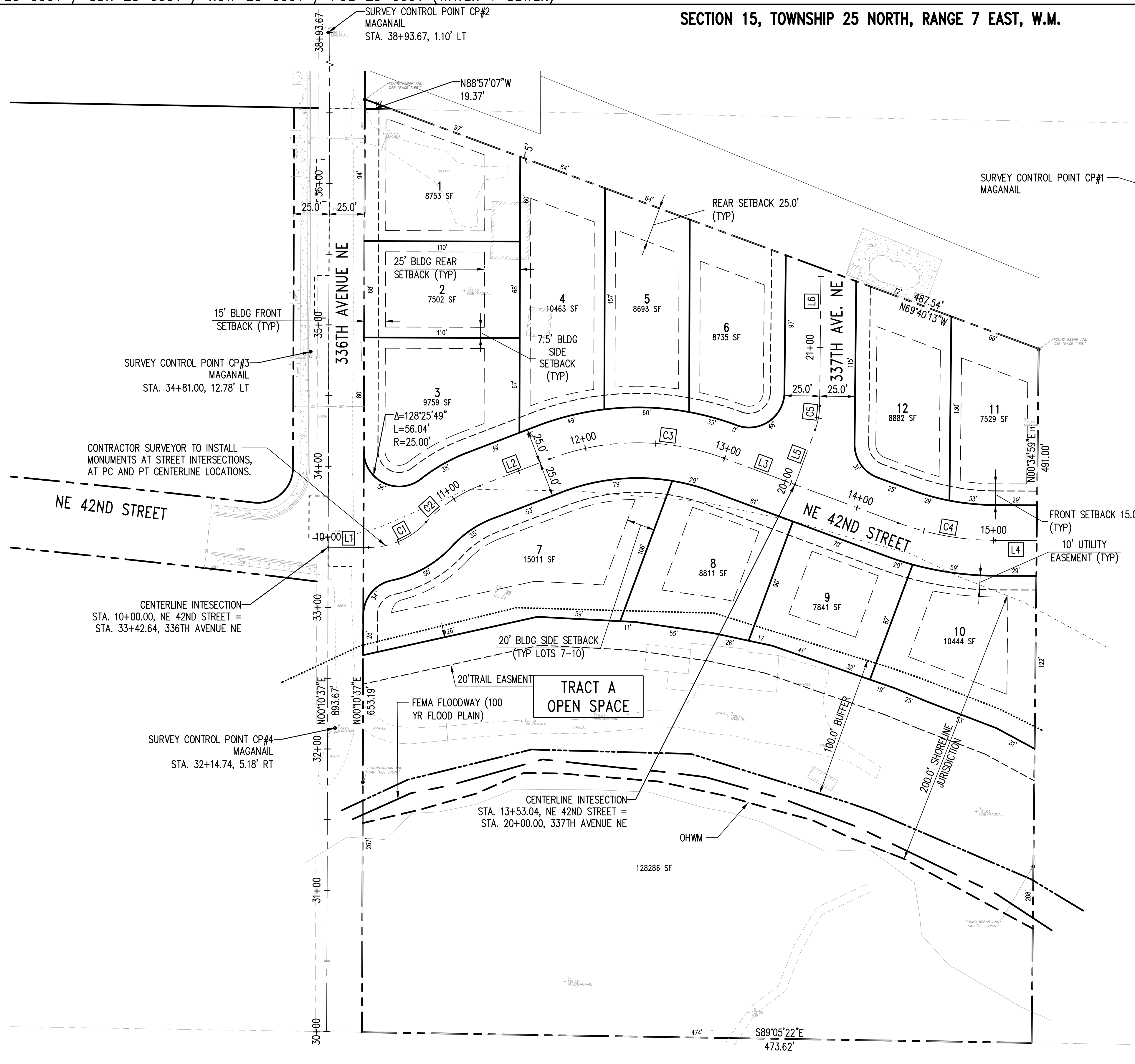
SITE INFORMATION:

SITE AREA 6.28 ACRES±
 SITE ZONING R4
 NUMBER OF LOTS 12
 MINIMUM LOT SIZE 7,500 SF
 SMALLEST PROPOSED LOT 7,529 SF
 AVERAGE LOT SIZE 9,369 SF
 BUILDING SETBACKS
 FRONT 15'
 SIDE AVERAGE 7.5' (MIN 5') TO 20' ADJACENT TO CRITICAL AREA
 REAR 25'
 RECREATIONAL SPACE REQUIRED N/A

SURVEY CONTROL POINTS (PER SURVEY PREPARED BY KPFF CONSULTING ENGINEERS)				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	237387.842	1380410.531	131.92	MAGANAIL
2	237683.528	1379832.042	126.94	MAGANAIL
3	237270.895	1379819.082	126.66	MAGANAIL
4	237004.580	1379836.219	124.69	MAGANAIL

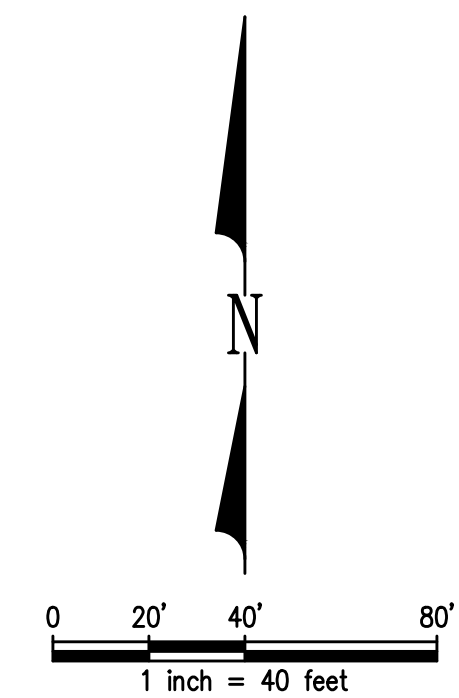
LINE TABLE		
LINE #	DISTANCE	BEARING
L1	28.61'	S89°49'23"E
L2	52.62'	N69°04'24"E
L3	131.18'	S69°38'21"E
L4	29.28'	S89°49'23"E
L5	41.28'	N20°21'39"E
L6	97.46'	N0°34'59"E

CURVE TABLE			
CURVE #	DELTA	RADIUS	LENGTH
C1	47°41'22"	55.00'	45.78'
C2	26°35'09"	100.00'	46.40'
C3	41°17'15"	175.00'	126.11'
C4	20°11'02"	200.00'	70.45'
C5	19°46'40"	50.00'	17.26'



LEGEND

- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE/ROW LINE
- CENTERLINE
- BUILDING SET BACK LINE
- PROPOSED UTILITY EASEMENT LINE
- CHANNEL MIGRATION ZONE (CMZ)
- OHWM (TRIBUTARY SIDE CHANNEL)
- SHORELINE JURISDICTION
- SHORELINE BUFFER
- FEMA FLOODWAY (100 YR FLOOD PLAN)



Z:\2000001-2009999\2000639_Tolt Place\CAD\Design\CD-07\CD_C1.00_BACE.dwg Jun 06, 2023 - 9:20am RossC

NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD
 DESIGNED BY WTJ
 CHECKED BY WTJ
 APPROVED BY JSF
 DATE 12/22/2022
 J O B No. :2000639

CALL TWO BUSINESS DAYS BEFORE YOU DIG 1-800-424-5555
 SCALE: AS NOTED

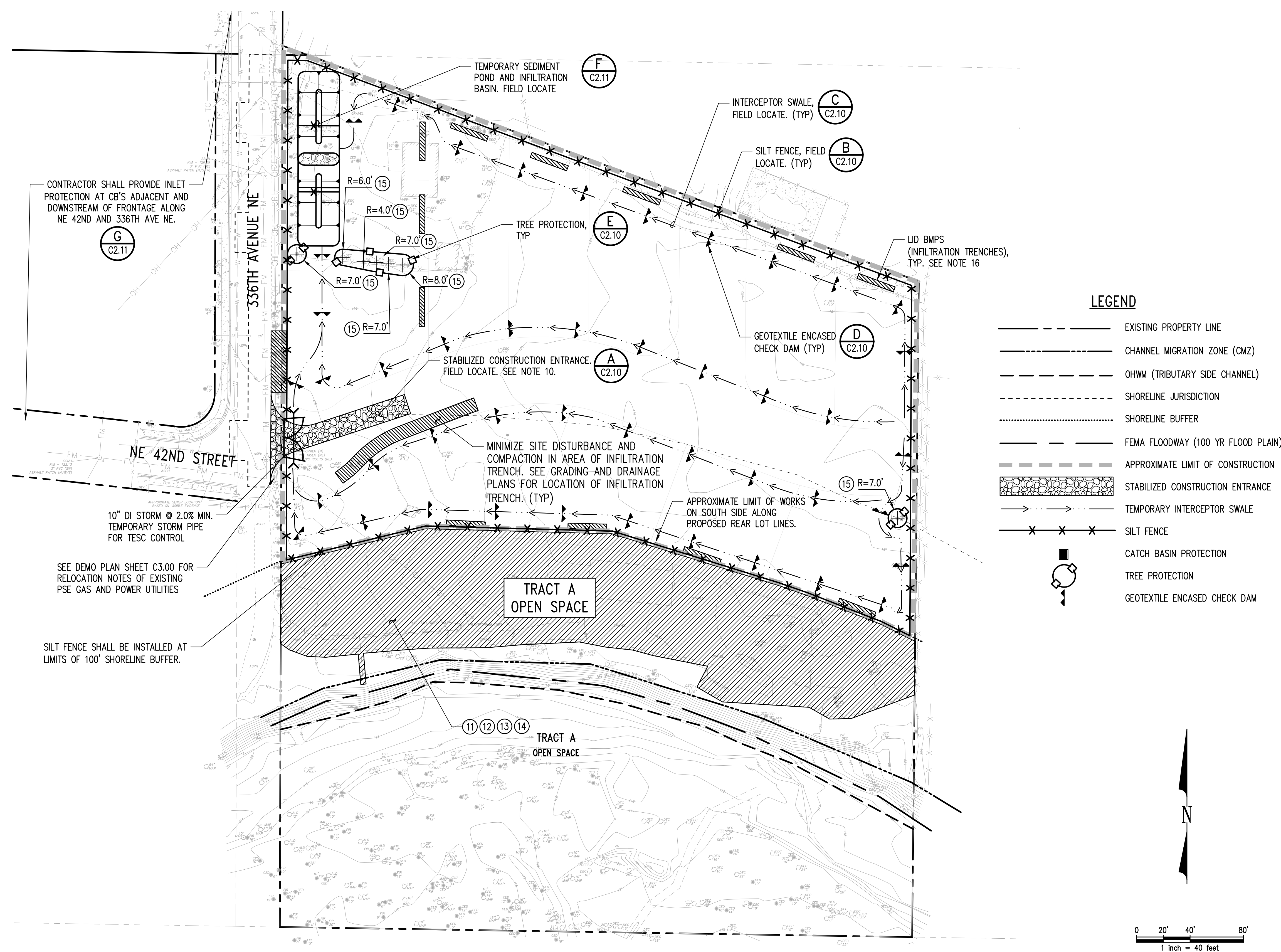


1601 5th Avenue, Suite 1600
 Seattle, WA 98101
 206.622.5822
 www.kpff.com



TOLT PLACE CARNATION, WASHINGTON		SHEET
CONSTRUCTION BASELINE PLAN		C1.00

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.

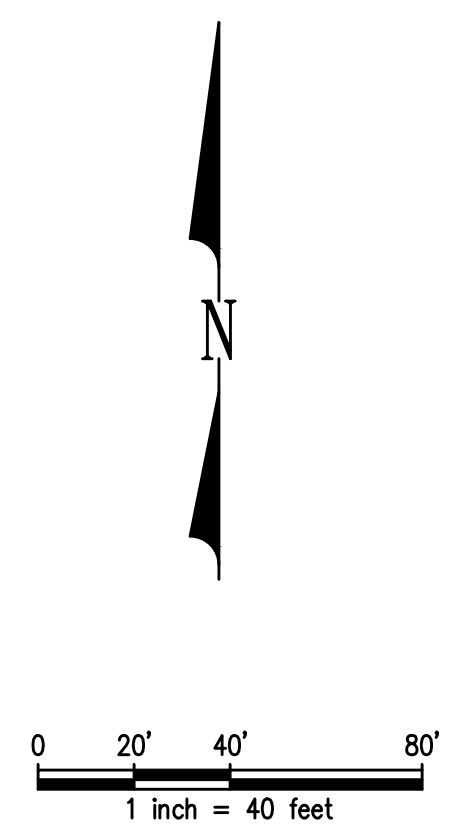


LEGEND

- EXISTING PROPERTY LINE
- - - CHANNEL MIGRATION ZONE (CMZ)
- - - OHWM (TRIBUTARY SIDE CHANNEL)
- - - SHORELINE JURISDICTION
- - - SHORELINE BUFFER
- - - FEMA FLOODWAY (100 YR FLOOD PLAIN)
- - - APPROXIMATE LIMIT OF CONSTRUCTION
- ▨ STABILIZED CONSTRUCTION ENTRANCE
- → → TEMPORARY INTERCEPTOR SWALE
- × × × SILT FENCE
- CATCH BASIN PROTECTION
- TREE PROTECTION
- ▭ GEOTEXTILE ENCASED CHECK DAM

TEMPORARY EROSION & SEDIMENT CONTROL (TESC) NOTES:

1. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY EROSION CONTROL AND SEDIMENT COLLECTION FACILITIES TO ENSURE THAT SEDIMENT-LADEN WATER DOES NOT ENTER THE NATURAL OR PUBLIC DRAINAGE SYSTEM PER CITY OF CARNATION REQUIREMENTS. AS CONSTRUCTION PROGRESSES AND UNEXPECTED (SEASONAL) CONDITIONS DICTATE, ADDITIONAL CONTROL FACILITIES MAY BE REQUIRED. DURING THE COURSE OF CONSTRUCTION IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY THE CONTRACTOR'S ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES THAT MAY BE NEEDED TO PROTECT ADJACENT PROPERTIES.
2. CONSTRUCTION RUNOFF SHALL BE DIRECTED TO THE ON-SITE INFILTRATING TEMPORARY SEDIMENT PONDS. THERE IS NO PROPOSED DISCHARGE OF CONSTRUCTION RUNOFF. CONTRACTOR SHALL OBTAIN APPROVAL FROM CITY AND WASHINGTON STATE DEPARTMENT OF ECOLOGY (WADOE) PRIOR TO DISCHARGING ANY CONSTRUCTION RUNOFF TO THE STORMWATER SYSTEM.
3. CONTRACTOR TO FOLLOW THE PROJECT STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PER THE APPROVED DOE NOTICE OF INTENT.
4. THE CONTRACTOR SHALL PROVIDE TEMPORARY VEHICULAR AND PEDESTRIAN TRAFFIC CONTROL TO ROUTE TRAFFIC AROUND THE PROJECT SIDE, AS REQUIRED. CONTRACTOR SHALL MAINTAIN FIRE ACCESS TO ALL BUILDINGS AND PROJECT AREA.
5. A CERTIFIED EROSION AND SEDIMENT CONTROL LEAD SHALL BE PRESENT ON-SITE OR BE ON-CALL AT ALL TIMES.
6. ALL CONSTRUCTION VEHICLES SHALL BE PARKED ON-SITE.
7. ALL MATERIAL STORAGE AND STOCKPILES SHALL BE LOCATED ON-SITE. STOCKPILES SHALL BE COVERED TO PROTECT AGAINST EROSION.
8. EXPOSED SOILS SHALL BE HYDROSEEDING TO REDUCE EROSION. COVER EXPOSED SOILS AS NEEDED TO PROTECT AGAINST EROSION.
9. DUST CONTROL SHALL BE IMPLEMENTED BY WETTING THE SITE AS NEEDED DURING CONSTRUCTION ACTIVITIES.
10. THE PUBLIC RIGHT OF WAY (ROW) SHALL BE KEPT CLEAN. MUD AND DEBRIS SHALL NOT BE TRACKED ONTO PUBLIC ROW. CONTRACTOR SHALL BE RESPONSIBLE FOR IMMEDIATE CLEAN-UP OF ANY MUD AND DEBRIS THAT IS TRACKED ONTO PUBLIC ROW.
11. SEE DEMOLITION PLAN FOR REMOVAL OF EXISTING BUILDINGS, GRAVEL, FENCING AND UTILITIES. WITHIN 100' SHORELINE BUFFER LIMITS, CONTRACTOR SHALL PROVIDE TEMPORARY EROSION & SEDIMENT CONTROL (TESC) MEASURES INCLUDING BUT NOT LIMITED TO SILT FENCE, TEMPORARY FENCING, AND STABILIZED CONSTRUCTION ENTRANCE. ALL CONSTRUCTION RUNOFF FROM THIS AREA SHALL BE DIRECTED TO TEMPORARY SEDIMENT AND INFILTRATION POND.
12. ALL EXISTING TREES SOUTH OF 100' SHORELINE BUFFER LINE SHALL REMAIN AND BE PROTECTED. SEE LANDSCAPE PLANS FOR TREE PROTECTION FENCING.
13. CONTRACTOR SHALL PLANT NATIVE VEGETATION AT LIMITS OF DEMOLITION OF EXISTING SITE IMPROVEMENTS AND UTILITIES WITHIN 100' SHORELINE BUFFER LIMITS. COORDINATE NATIVE VEGETATION RESTORATION WITH LANDSCAPE ARCHITECT.
14. CONTRACTOR SHALL REMOVE TEMPORARY EROSION & SEDIMENT CONTROL (TESC) MEASURES UPON FULL STABILIZATION AND NO ADDITIONAL WORK WITHIN LIMITS OF 100' SHORELINE BUFFER SHALL BE ALLOWED UNLESS OTHERWISE APPROVED BY THE CITY.
15. TREE PROTECTION FENCE MINIMUM RADIUS TO ENCOMPASS ICZR PER NOTE 4 ON DETAIL (F) ON SHEET C2.10.
16. PROTECT LID BMPs IN ACCORDANCE WITH MINIMUM REQUIREMENT 2, ELEMENT 13 OF THE DEPARTMENT OF ECOLOGY 2019 STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON.

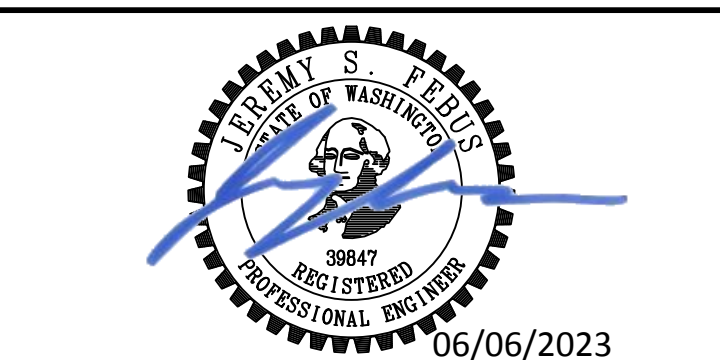


Jun 06, 2023 - 9:20am
 RossC
 Z:\2000001-2009999\2000639_Tolt Place\CAD\Design\CD-07\CD_C2.00_TESC.dwg

NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD
 CHECKED BY WTJ
 DESIGNED BY WTJ
 APPROVED BY JSF
 DATE 12/22/2022
 J O B No. :2000639

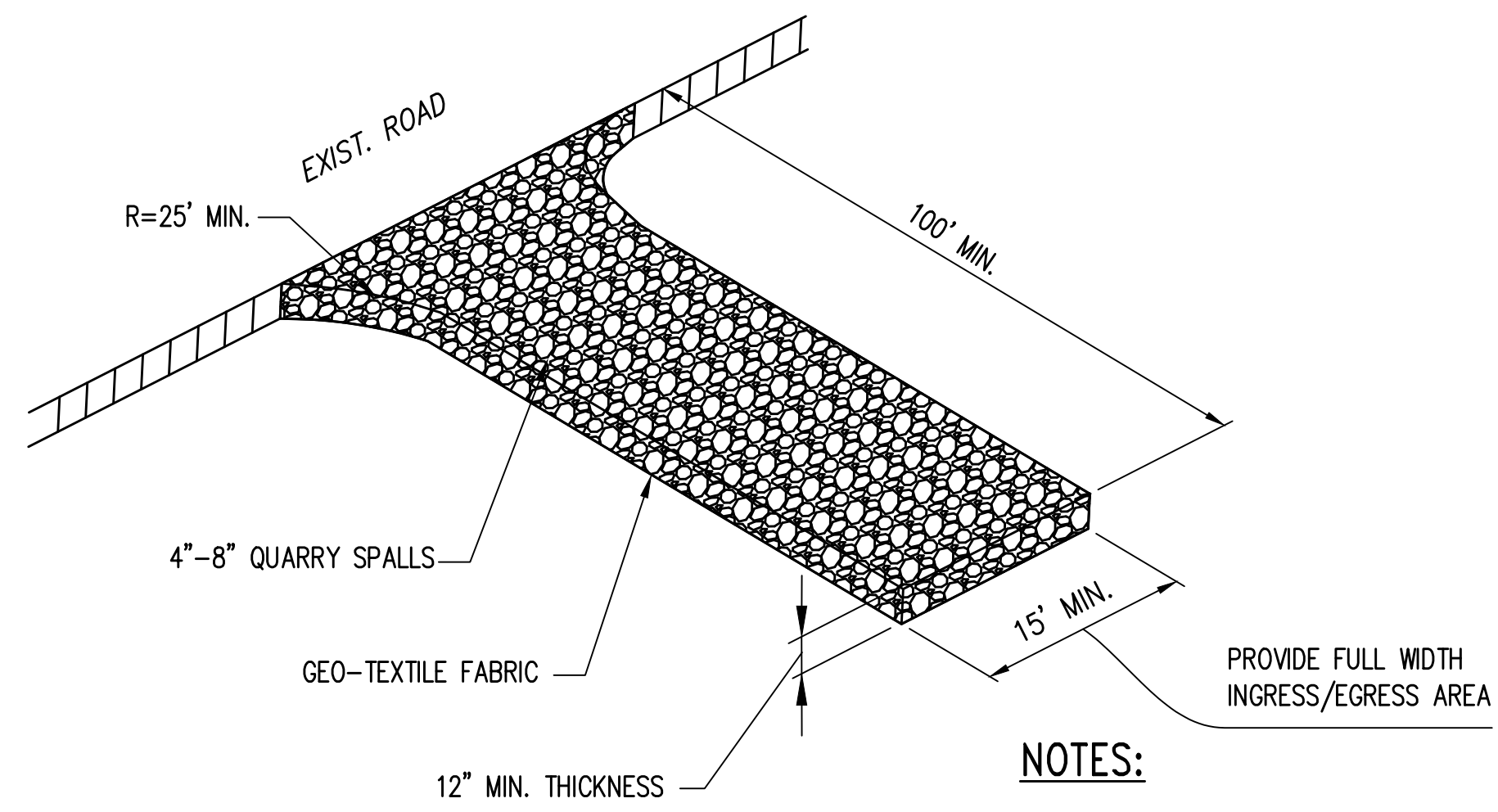
CALL TWO BUSINESS DAYS BEFORE YOU DIG 1-800-424-5555
 SCALE: AS NOTED



TOLT PLACE
 CARNATION, WASHINGTON
 TEMPORARY EROSION & SEDIMENT CONTROL (TESC) PLAN

SHEET
 C2.00

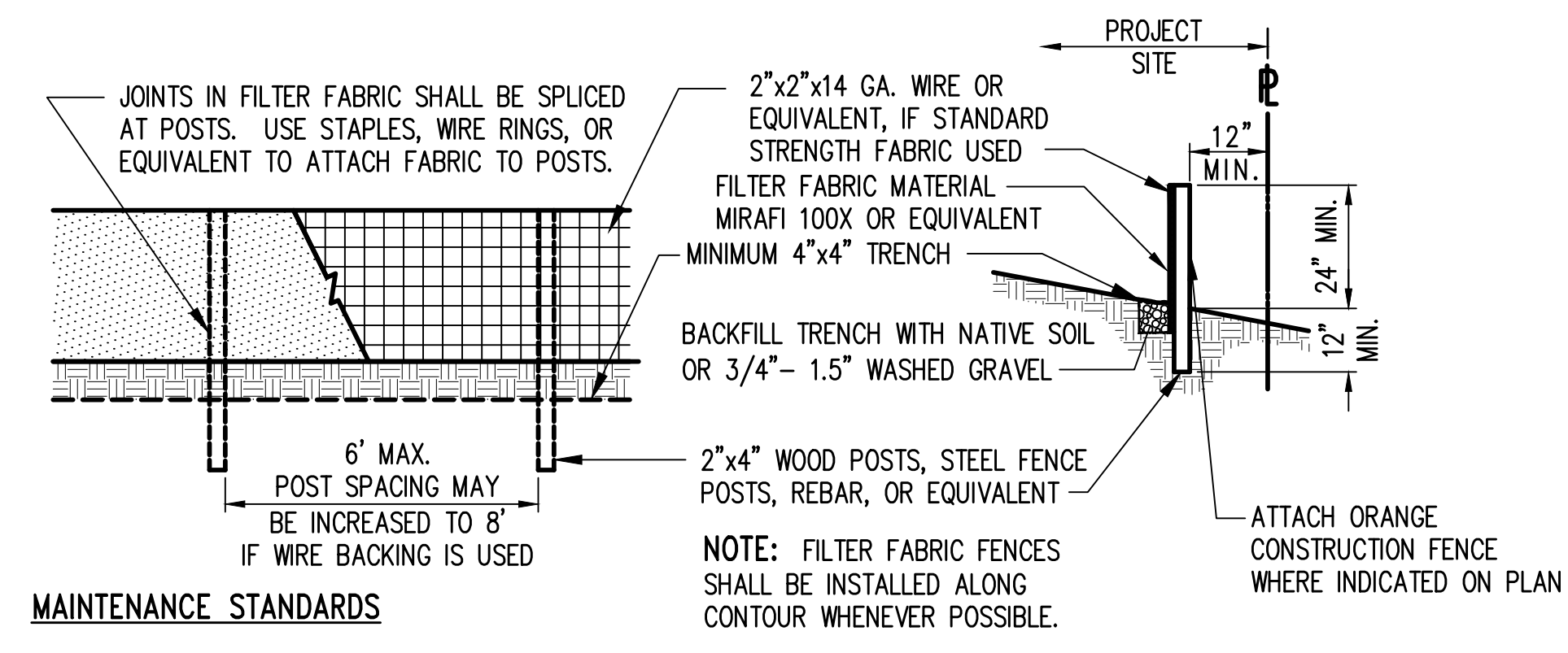
SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.



NOTES:

1. INSTALL AND MAINTAIN STABILIZED CONSTRUCTION ENTRANCE PER DOE BMP C1.05

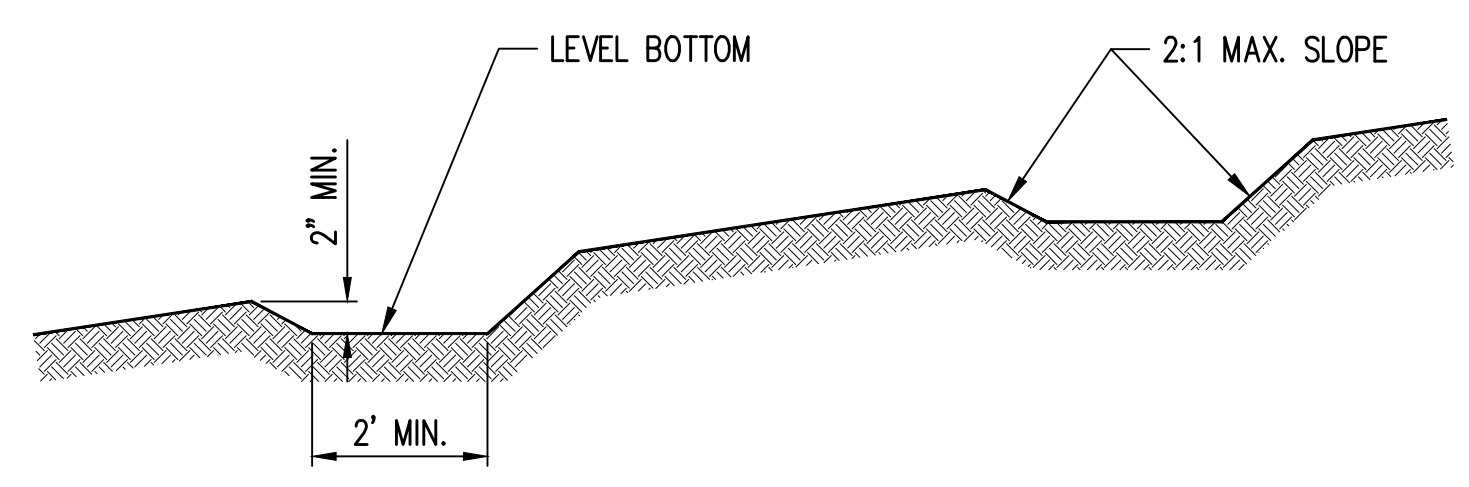
STABILIZED CONSTRUCTION ENTRANCE
NTS (A) C2.00



MAINTENANCE STANDARDS

1. ANY DAMAGE SHALL BE REPAIRED IMMEDIATELY.
2. IF CONCENTRATED FLOWS ARE EVIDENT UPHILL OF THE FENCE, THEY MUST BE INTERCEPTED AND CONVEYED TO A SEDIMENT TRAP OR POND.
3. IT IS IMPORTANT TO CHECK THE UPHILL SIDE OF THE FENCE FOR SIGNS OF THE FENCE CLOGGING AND ACTING AS A BARRIER TO FLOW AND THEN CAUSING CHANNELIZATION OF FLOWS PARALLEL TO THE FENCE. IF THIS OCCURS, REPLACE THE FENCE OR REMOVE THE TRAPPED SEDIMENT.
4. SEDIMENT MUST BE REMOVED WHEN THE SEDIMENT IS 6" HIGH.
5. IF THE FILTER FABRIC HAS DETERIORATED DUE TO ULTRAVIOLET BREAKDOWN, IT SHALL BE REPLACED.
6. INSTALL, MAINTAIN AND REPAIR IN ACCORDNACE WITH DOE BMP C2.33

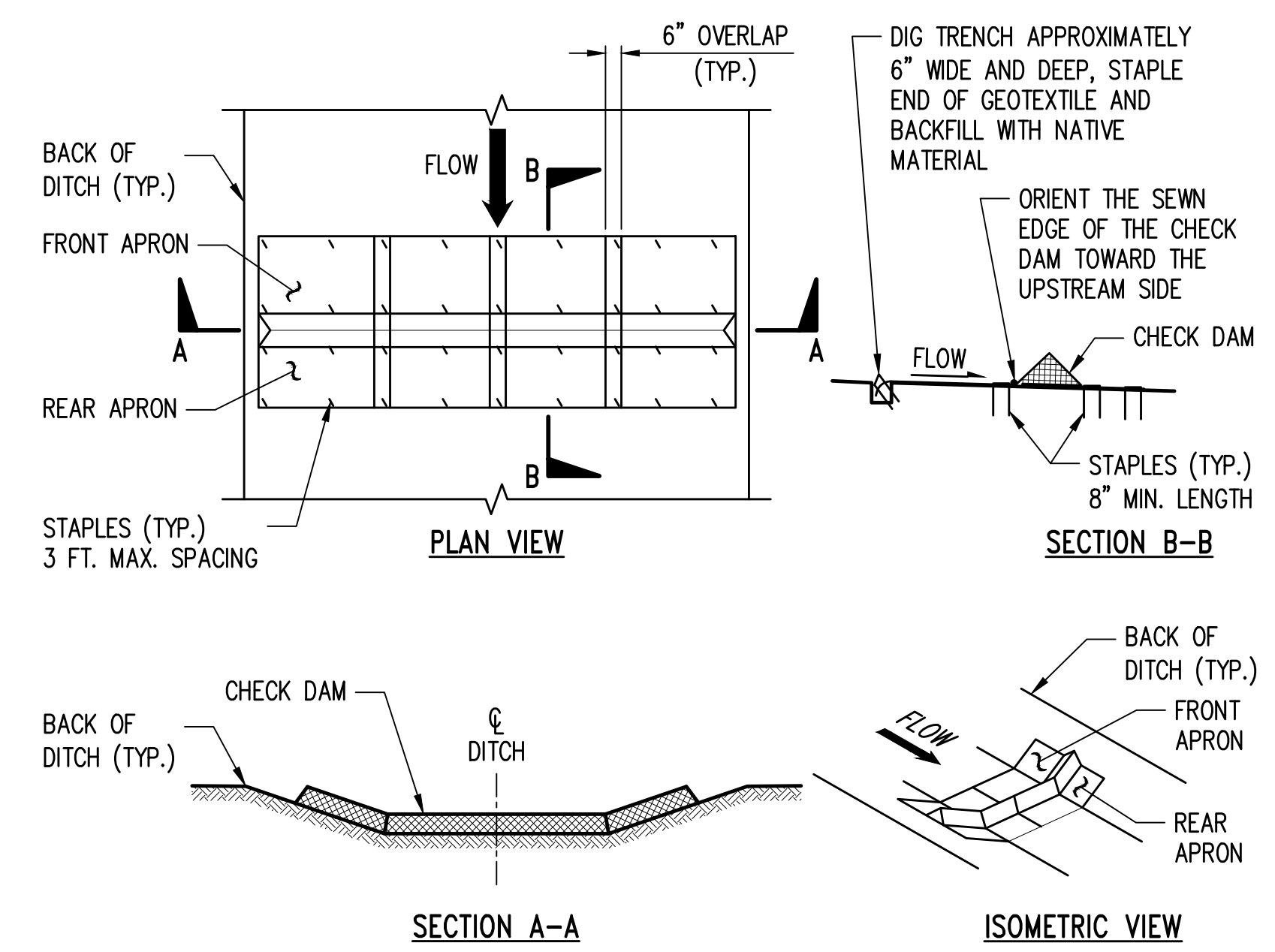
SILT FENCE
NTS (B) C2.00



NOTES:

1. INSTALL AND MAINTAIN TEMPORARY INTERCEPTOR SWALE PER DOE BMP C200.
2. DAMAGE RESULTING FROM RUNOFF OR CONSTRUCTION ACTIVITY SHALL BE REPAIRED IMMEDIATELY.

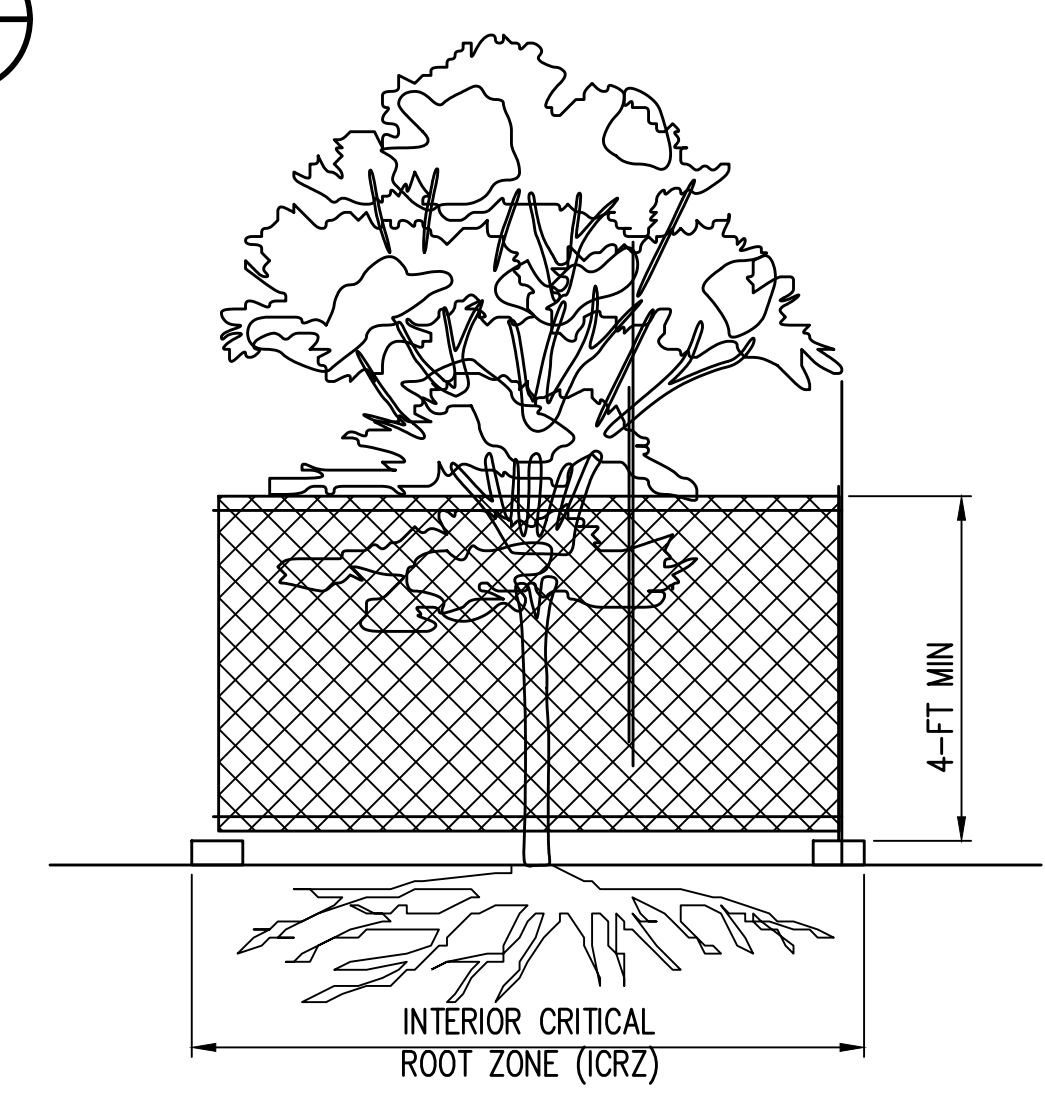
TEMPORARY INTERCEPTOR SWALE
NTS (C) C2.00



NOTES:

1. INSTALL AND MAINTAIN GEOTEXTILE ENCASED CHECK DAM PER DOE BMP C208.

GEOTEXTILE ENCASED CHECK DAM
NTS (D) C2.00



NOTES:

1. TREE PROTECTION BARRIERS SHALL BE A MINIMUM OF FOUR FEET HIGH, CONSTRUCTED OF CHAIN LINK, PER DETAIL 6 THIS SHEET OR POLYETHYLENE LAMINAR SAFETY FENCING OR SIMILAR MATERIAL, SUBJECT TO APPROVAL BY THE CITY. "TREE PROTECTION AREA" SIGNS SHALL BE POSTED VISIBLY ON ALL SIDES OF THE FENCED AREAS.
2. FOR ROOTS OVER 1-IN DIA. THAT ARE DAMAGED DURING CONSTRUCTION, MAKE A CLEAN, STRAIGHT CUT TO REMOVE THE DAMAGED PORTION. ALL EXPOSED ROOTS SHALL BE TEMPORARILY COVERED WITH DAMP BURLAP TO PREVENT DRYING, AND SHALL BE COVERED WITH SOIL AS SOON AS POSSIBLE.
3. WORK WITHIN PROTECTION FENCE SHALL BE DONE MANUALLY. NO STOCKPILING OF MATERIALS, VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MACHINERY SHALL BE ALLOWED WITHIN THE LIMIT OF THE FENCING.
4. NO CONSTRUCTION SHALL OCCUR WITHIN THE INTERIOR CRITICAL ROOT ZONE (ICRZ). THE ICRZ PROTECTION AREA IS IDENTIFIED AS 6" RADIUS PER 1" DIAMETER OF TREE AS MARKED ON THE SURVEY. (EXAMPLE: A 16" DIAMETER TREE HAS AN ICRZ PROTECTION AREA WITH AN 8-FOOT RADIUS).
5. ALL GRADING WITHIN THE CRITICAL ROOT ZONE (CRZ) SHALL BE DONE BY HAND. THE CRZ IDENTIFIED AS A 1' RADIUS PER 1" DIAMETER OF TREE AS MARKED ON THE SURVEY. GRADING WITHIN THE CRZ SHALL BE DONE UNDER THE SUPERVISION OF THE PROJECT'S ARBORIST AND THE CONTRACTOR SHALL COORDINATE FINE GRADING IN THIS AREA AND/OR TREE REMOVAL/REPLACEMENT WITH THE ARBORIST AND CITY INSPECTOR.

TREE PROTECTION
NTS (E) C2.00

Z:\2000001-2009999\2000639 Toll Place\CAD\Design\CD-CITY\CD C2.00 TESC.dwg Jun 06, 2023 - 9:20am RossC

NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD	DESIGNED BY WTJ
CHECKED BY WTJ	APPROVED BY JSF
DATE 12/22/2022	
JOB No. :2000639	

CALL TWO BUSINESS DAYS BEFORE YOU DIG
1-800-424-5555

SCALE:
AS NOTED

kpff
1601 5th Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
www.kpff.com

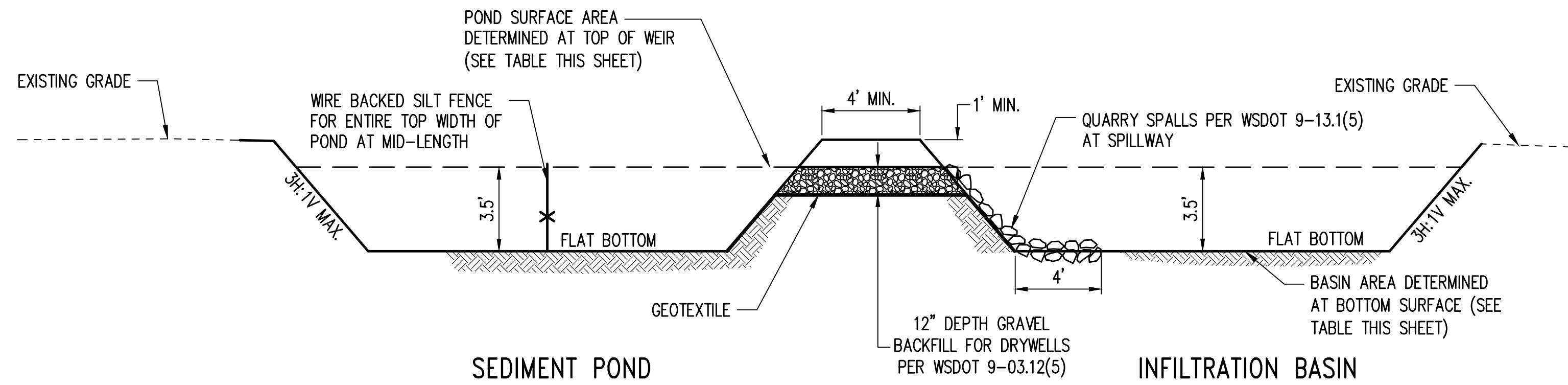
PROFESSIONAL ENGINEER
STATE OF WASHINGTON
39847
06/06/2023

TOLT PLACE
CARNATION, WASHINGTON

TEMPORARY EROSION & SEDIMENT CONTROL (TESC) DETAILS

SHEET
C2.10

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.



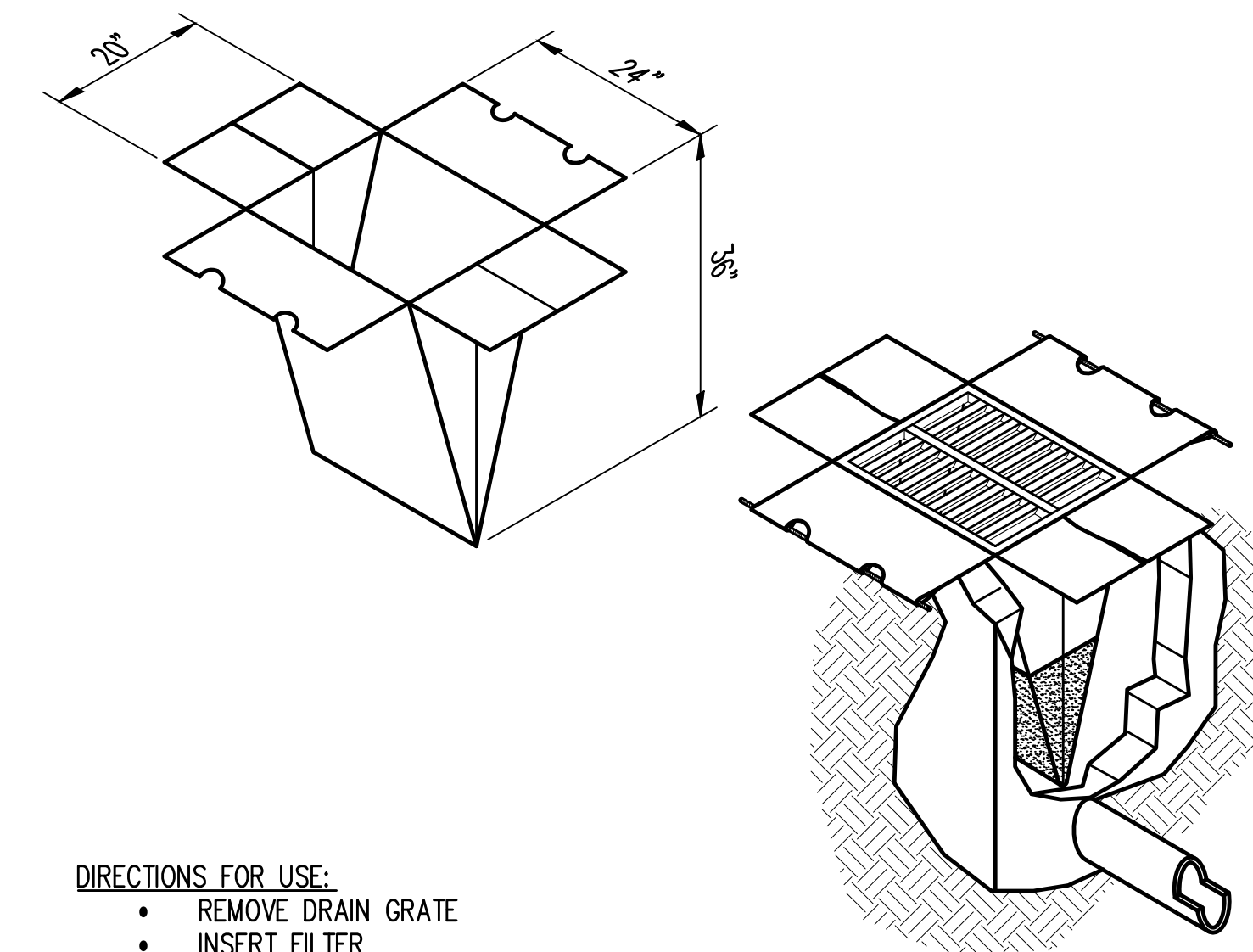
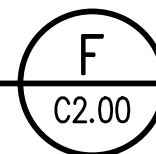
NOTES:

1. INSTALL AND MAINTAIN SEDIMENT POND PER DOE BMP C241.
2. SEDIMENT SHALL BE REMOVED FROM THE POND WHEN IT REACHES 1 FOOT IN DEPTH.
3. INFILTRATION BASIN SHALL BE CONSTRUCTED ENTIRELY IN CUT. ADDITIONAL BASIN DEPTH MAY BE NECESSARY TO ACHIEVE FULL INFILTRATION OF CONSTRUCTION RUNOFF.
4. CONTRACTOR SHALL DREDGE INFILTRATION BASIN AS NECESSARY TO MAINTAIN PERFORMANCE.
5. FOLLOWING CONSTRUCTION THE INFILTRATION BASIN AND SEDIMENT POND AREAS SHALL BE OVER-EXCAVATED TO REMOVE UNSUITABLE MATERIAL AND BACKFILLED WITH STRUCTURAL FILL AND COMPACTED TO GEOTECHNICAL ENGINEER'S RECOMMENDATIONS FOR BUILDING PAD PREPARATION.
6. QUARRY SPALLS SHALL BE PER WSDOT STANDARD SPECIFICATIONS SECTION 9-13.6.

SUB-BASIN	POND SURFACE AREA	POND BOTTOM ELEVATION	POND SURFACE ELEVATION	BASIN BOTTOM AREA	BASIN BOTTOM ELEVATION	BASIN SURFACE ELEVATION
1	2,190 SF (MIN)	120.00	124.50	540 SF (MIN)	120.00	124.50

TEMPORARY SEDIMENT POND
AND INFILTRATION BASIN

NTS



DIRECTIONS FOR USE:

- REMOVE DRAIN GRATE
- INSERT FILTER
- REPLACE GRATE TO HOLD IN POSITION

SPECIFICATIONS:

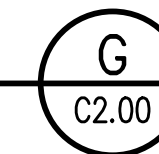
- FILTERS MIN 3 FEET DEEP
- CONSTRUCTED OF WOVEN POLYPROPYLENE
- SEAMS DOUBLE-STITCHED
- PERMEABILITY-40GAL PER MINUTE PER SQUARE FOOT
- REUSABLE OR THROW-AWAY

MAINTENANCE:

- PERFORM MAINTENANCE IN ACCORDANCE WITH LATEST EDITION STORMWATER MANAGEMENT MANUAL FOR EASTERN WASHINGTON PUBLISHED BY THE DEPARTMENT OF ECOLOGY FOR BMP C220.

STORMCATCH BASIN
INLET PROTECTION

NTS



Z:\2000001-2009999\2000639 Toll Place\CAD\Design\CD-07\CD C2.00 TESC.dwg

Jun 06, 2023 - 9:20am RossC

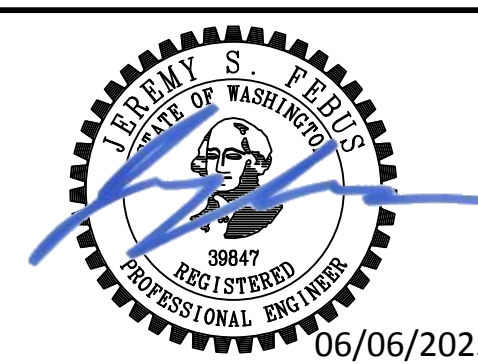
NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD	DESIGNED BY WTJ
CHECKED BY WTJ	APPROVED BY JSF
DATE 12/22/2022	
JOB No.: 2000639	

CALL TWO BUSINESS
DAYS BEFORE YOU DIG
1-800-424-5555

SCALE:
AS NOTED

kpff
1601 5th Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
www.kpff.com

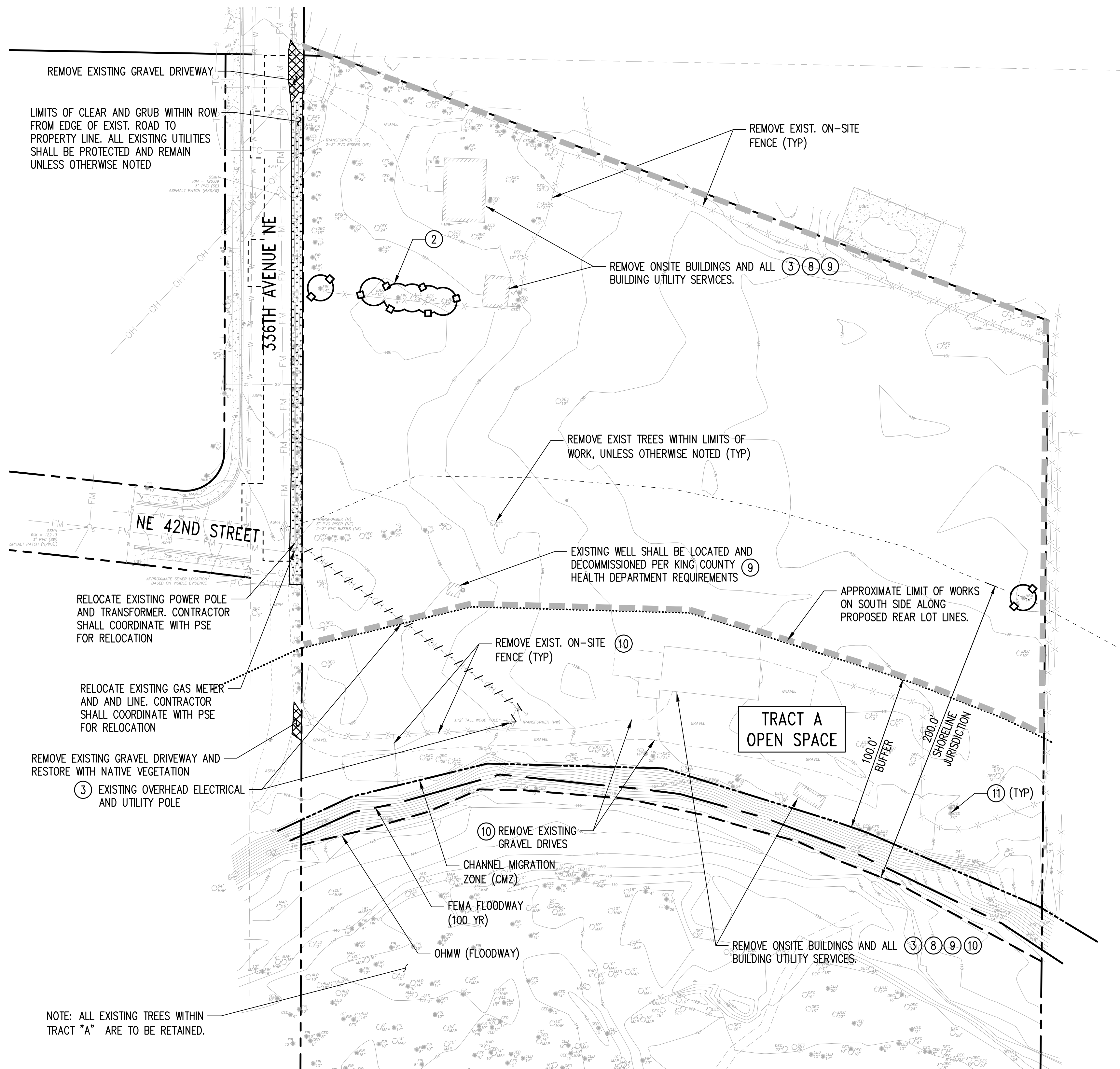


TOLT PLACE
CARNATION, WASHINGTON

TEMPORARY EROSION & SEDIMENT CONTROL (TESC) DETAILS

SHEET
C2.11

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.

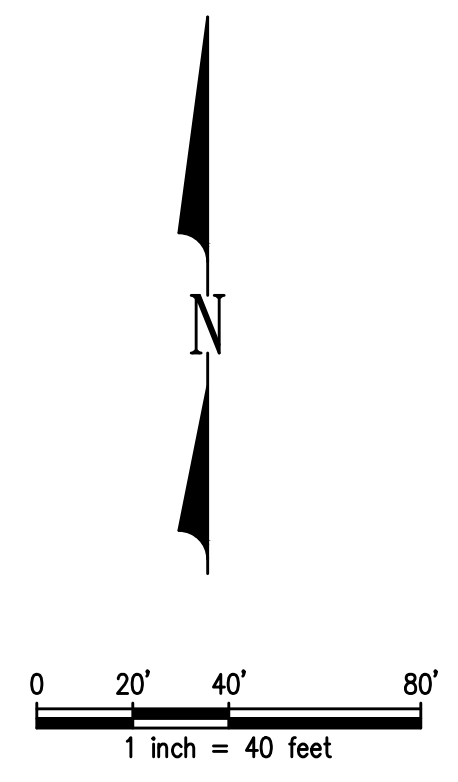


DEMOLITION NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO THE START OF DEMOLITION ACTIVITIES.
2. ALL EXISTING TREES TO REMAIN SHALL BE PROTECTED PER DETAIL F ON SHEET C2.10. CLEARING WITHIN THE CRZ OF TREES TO REMAIN SHALL BE DONE BY HAND IN ORDER TO PROTECT THE TREES TO REMAIN. SEE LANDSCAPE TREE RETENTION PLAN FOR TREE FENCING DETAILS.
3. COORDINATE WITH ELECTRICAL AND FRANCHISE UTILITY PROVIDERS TO DE-ENERGIZE AND REMOVE UTILITIES PRIOR TO DEMOLITION.
4. SURFACE AND BELOW GRADE IMPROVEMENTS TO REMAIN ON NEIGHBORING PROPERTIES SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE IF DAMAGED DURING DEMOLITION/ CONSTRUCTION ACTIVITIES.
5. DISPOSE OF DEMOLITION MATERIALS OFF-SITE IN A SAFE AND LEGAL MANNER.
6. PROVIDE CONSTRUCTION FENCING, SIGNAGE, AND BARRIERS AS REQUIRED TO PREVENT UNAUTHORIZED ACCESS TO THE SITE. TEMPORARY CHAINLINK CONSTRUCTION FENCING SHALL BE PER DETAIL 6 ON SHEET C2.10. EXISTING FENCE MAY BE PROTECTED AS TEMPORARY BARRIER IF DEEMED BY THE OWNER TO PROVIDE ADEQUATE SECURITY.
7. PRIOR TO DEMOLITION CONTRACTOR SHALL PERFORM THE FOLLOWING:
 - COORDINATE TIMING FOR ALL UTILITY DISCONNECTS WITH APPROPRIATE SERVICE PROVIDERS
 - NOTIFY AFFECTED UTILITY COMPANIES AND CIVIL ENGINEER
 - OBTAIN NECESSARY UTILITY PERMITS.
8. SEWER SERVICE FOR EXISTING ONSITE BUILDINGS ARE PROVIDED BY EXISTING ONSITE SEPTIC SYSTEM. CONTRACTOR SHALL LOCATE AND DECOMMISSION EXISTING SEPTIC SYSTEMS FOR ALL EXISTING ONSITE BUILDINGS PER KING COUNTY DEPARTMENT OF HEALTH REQUIREMENTS AND PROVIDE RECORDS OF SEPTIC SYSTEM DECOMMISSION TO THE CITY OF CARNATION
9. WATER SERVICE FOR EXISTING ONSITE BUILDINGS ARE PROVIDED BY AN EXISTING ONSITE WELL. WATER SERVICE LINES FOR EXISTING BUILDINGS SHALL BE REMOVED. CONTRACTOR SHALL LOCATE AND DECOMMISSION EXISTING WELLS PER KING COUNTY DEPARTMENT OF HEALTH REQUIREMENTS AND PROVIDE RECORDS OF WELL DECOMMISSION TO THE CITY OF CARNATION
10. REMOVAL OF EXISTING ABOVE AND BELOW GRADE IMPROVEMENTS AND UTILITIES WITHIN THE SHORELINE BUFFER AREA SHALL BE RESTORED WITH NATIVE VEGETATION PLANTINGS. SEE LANDSCAPE PLANS FOR LANDSCAPE RESTORATION. NO
11. ALL EXISTING TREES SOUTH OF SHORELINE BUFFER LIMITS SHALL BE PROTECTED AND REMAIN. SEE LANDSCAPE PLANS FOR TREE PROTECTION FENCING.

LEGEND

- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE/ROW LINE
- CENTERLINE
- BUILDING SET BACK LINE
- PROPOSED UTILITY EASEMENT LINE
- CHANNEL MIGRATION ZONE (CMZ)
- OHWM (TRIBUTARY SIDE CHANNEL)
- SHORELINE JURISDICTION
- SHORELINE BUFFER
- FEMA FLOODWAY (100 YR FLOOD PLAIN)
- APPROXIMATE LIMIT OF CONSTRUCTION
- TREE PROTECTION
- ▨ CLEAR AND GRUB AREA
- ▩ GRAVEL DRIVEWAY REMOVAL



NOTE: ALL EXISTING TREES WITHIN TRACT "A" ARE TO BE RETAINED.

Z:\2000001-2009999\2000639_Tolt Place\CAD\Design\CD-CITY\CD_C3.00_DEMO.dwg Jun 06, 2023 - 9:20am RossC

NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD	DESIGNED BY WTJ
CHECKED BY WTJ	APPROVED BY JSF
DATE 12/22/2022	
J O B No. :2000639	

CALL TWO BUSINESS DAYS BEFORE YOU DIG
1-800-424-5555

SCALE:
AS NOTED



TOLT PLACE
CARNATION, WASHINGTON

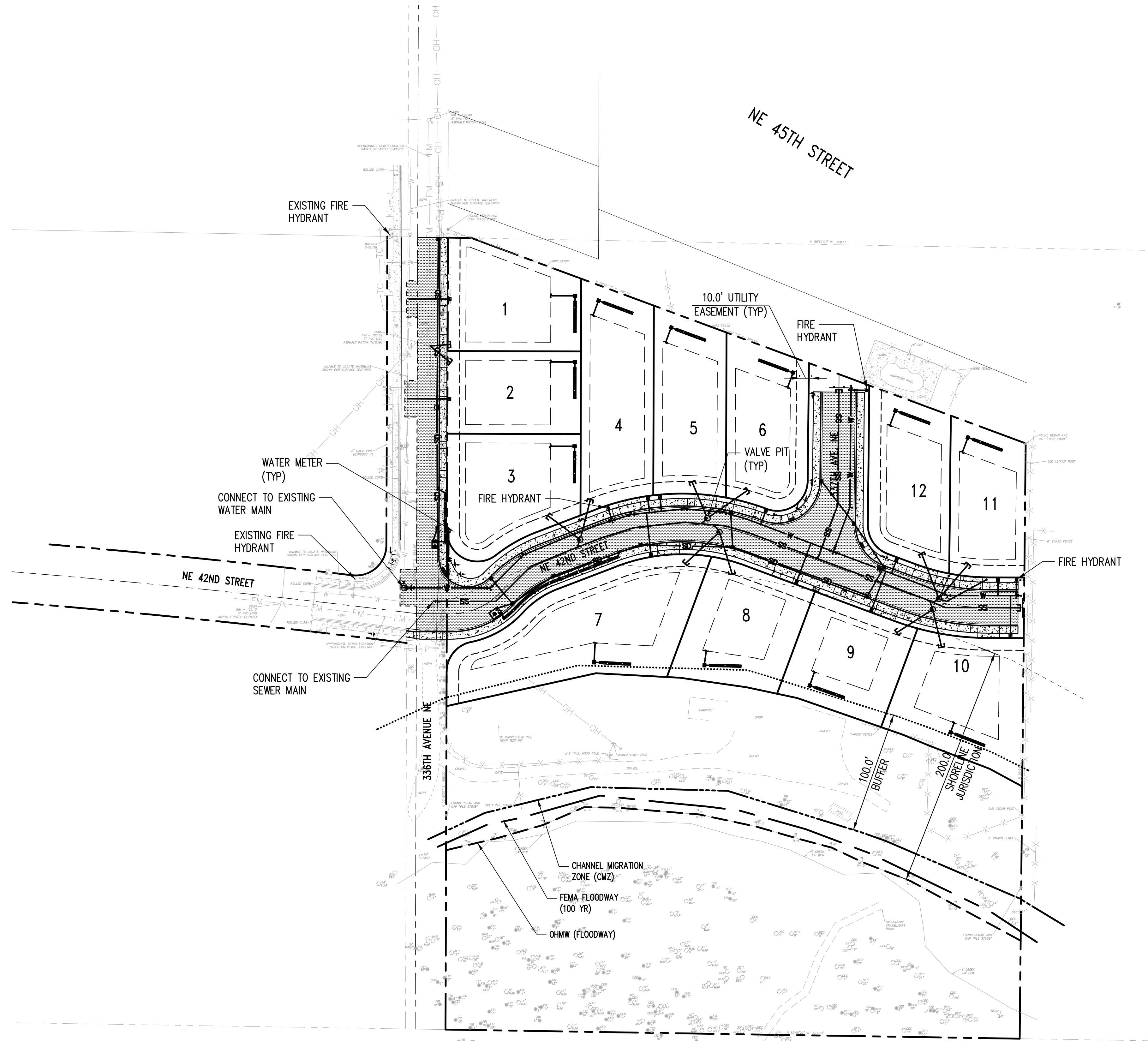
DEMOLITION PLAN

SHEET
C3.00

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.

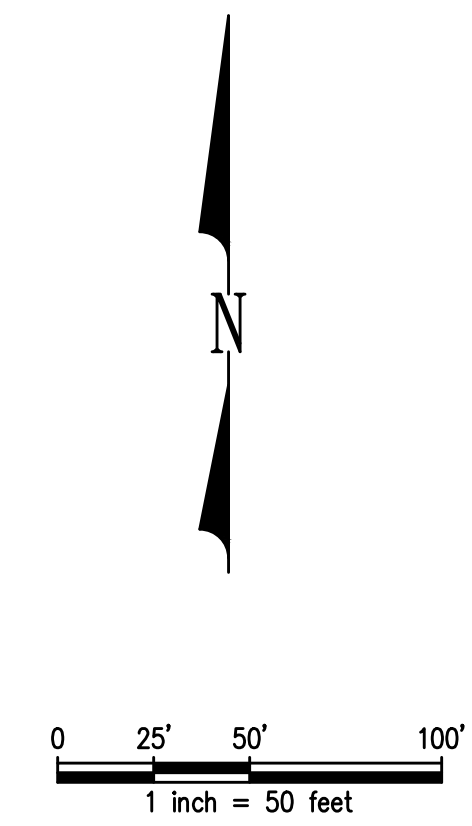
UTILITY NOTES:

- SEE SHEET C6.00 SERIES FOR STORM DRAINAGE CONSTRUCTION DETAILS.
- SEE SHEET C7.00 SERIES FOR WATER MAIN AND SERVICE CONSTRUCTION DETAILS.
- SEE SHEET C8.00 SERIES FOR SANITARY SEWER MAIN AND SIDE SEWER CONSTRUCTION DETAILS.



LEGEND

- WATER MAIN
- WATER METER
- FIRE HYDRANT
- SANITARY SEWER MAIN (SS)
- SIDE SEWER STUB
- VALVE PIT
- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE/ROW LINE
- CENTERLINE
- BUILDING SET BACK LINE
- EASEMENT LINE
- WETLAND BUFFER LINE
- CHANNEL MIGRATION ZONE (CMZ)
- OHWM (TRIBUTARY SIDE CHANNEL)
- SHORELINE JURISDICTION
- SHORELINE BUFFER
- FEMA FLOODWAY (100 YR FLOOD PLAIN)
- CB W/ INFILTRATION TRENCH



Z:\2000001-2009999\2000639_Tolt Place\CAD\Design\CD-CITY\CD_C4.00_UTL.dwg

NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD
 DESIGNED BY WTJ
 CHECKED BY WTJ
 APPROVED BY JSF
 DATE 12/22/2022
 J O B No. :2000639

CALL TWO BUSINESS DAYS BEFORE YOU DIG 1-800-424-5555

SCALE: AS NOTED



TOLT PLACE
 CARNATION, WASHINGTON

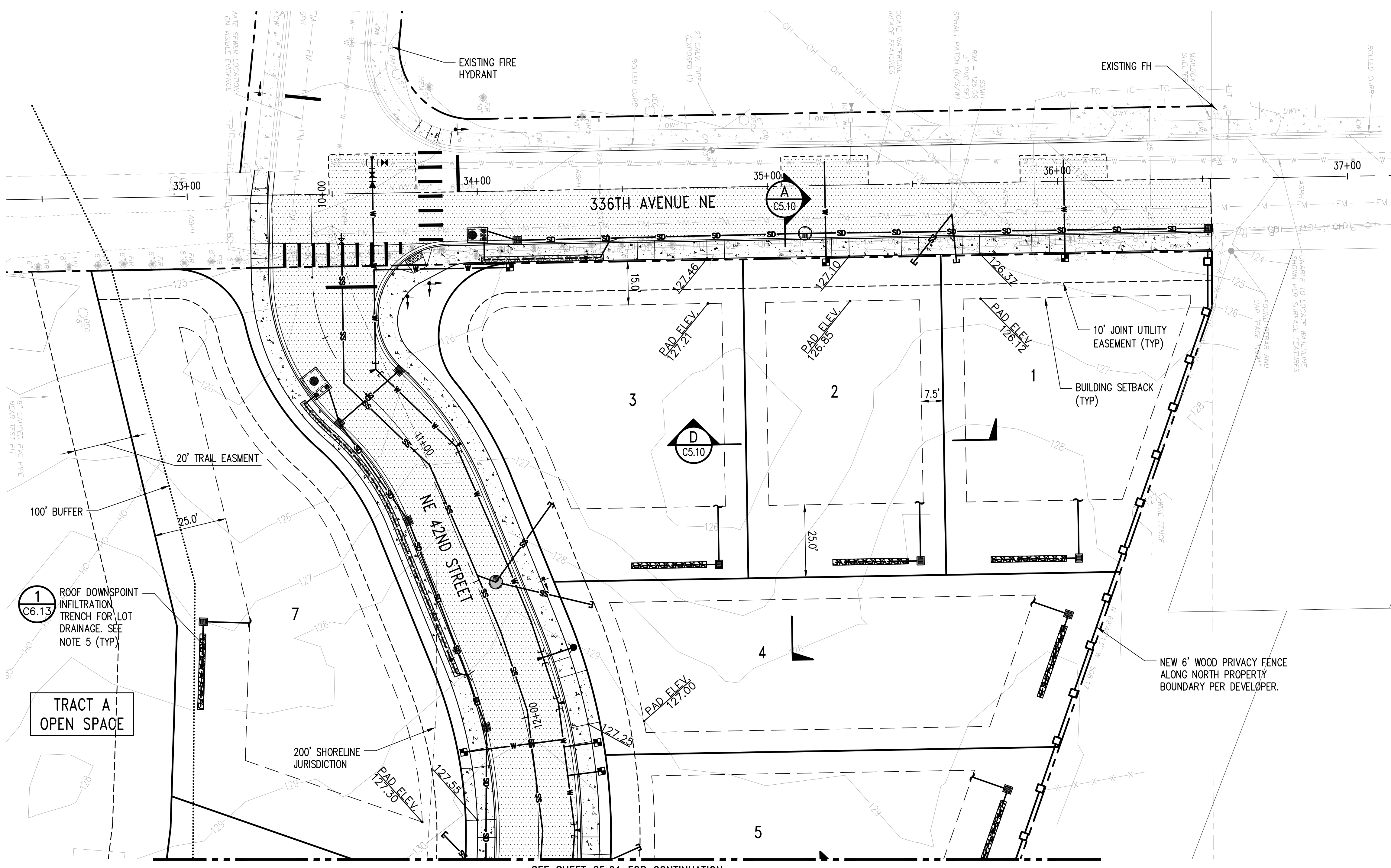
COMPOSITE UTILITY PLAN

SHEET
C4.00

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.

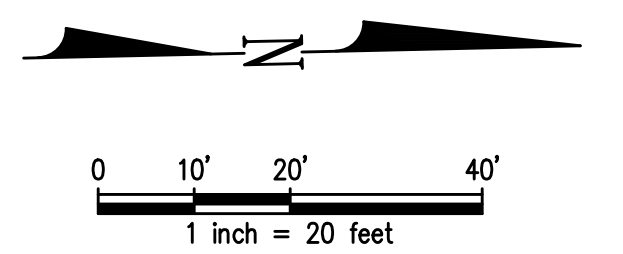
LOT GRADING AND DRAINAGE NOTES:

1. ALL VEGETATION, ORGANIC SURFACE SOILS, AND OTHER DELETERIOUS MATERIALS SHALL BE REMOVED FROM SITE.
2. ROADWAY CONTOURS ARE SHOWN HERE FOR REFERENCE. SEE ROAD AND DRAINAGE PLANS FOR ROAD GRADING AND SECTIONS.
3. CONTOURS AND FINISH PAD ELEVATIONS ON LOTS ARE STRUCTURAL PAD ELEVATIONS.
4. ALL CUT/FILL SLOPES SHALL BE MAX 3H:1V.
5. THE APPROXIMATE IMPERVIOUS AREA OF EACH LOT IS 2,800 SF. THE PRELIMINARY INFILTRATION TRENCH SIZE FOR EACH LOT IS 26 FEET PER DETAIL 1 ON SHEET C6.13. INFILTRATION TRENCH SIZES AND LOCATIONS SHOWN ARE PRELIMINARY. FINAL SIZE AND LOT LOCATION WILL BE DETERMINED AT THE TIME OF BUILDING PERMIT. INFILTRATION TRENCH SHALL BE CONSTRUCTED WITH BUILDING CONSTRUCTION.
6. ANY FILL SOIL PLACED BENEATH A FOUNDATION, RETAINING WALL, ROADWAY OR DRIVEWAY MUST BE CONSTRUCTED AS A STRUCTURAL FILL. ANY EXISTING FILL SOILS OR LOOSE SOILS SHOULD BE REMOVED AND REPLACED WITH STRUCTURAL FILL PER THE PROJECT GEOTECHNICAL REPORT PREPARED BY SOUTH FORK GEOSCIENCES.



LEGEND

- WATER MAIN
- WATER METER
- FIRE HYDRANT
- SANITARY SEWER MAIN (SS)
- SIDE SEWER STUB
- VALVE PIT
- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE/ROW LINE
- CENTERLINE
- BUILDING SET BACK LINE
- EASEMENT LINE
- WETLAND BUFFER LINE
- CHANNEL MIGRATION ZONE (CMZ)
- OHWM (TRIBUTARY SIDE CHANNEL)
- SHORELINE JURISDICTION
- SHORELINE BUFFER
- FEMA FLOODWAY (100 YR FLOOD PLAN)
- WOOD FENCE



SEE SHEET C5.01 FOR CONTINUATION

Z:\2000001-2009999\2000639 Tolt Place\CAD\Design\CD-CITY\CD_C5.00_CD.dwg Jun 06, 2023 - 9:20am RossC

NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD	DESIGNED BY WTJ
CHECKED BY WTJ	APPROVED BY JSF
DATE 12/22/2022	
JOB No. :2000639	

CALL TWO BUSINESS DAYS BEFORE YOU DIG 1-800-424-5555

SCALE: AS NOTED



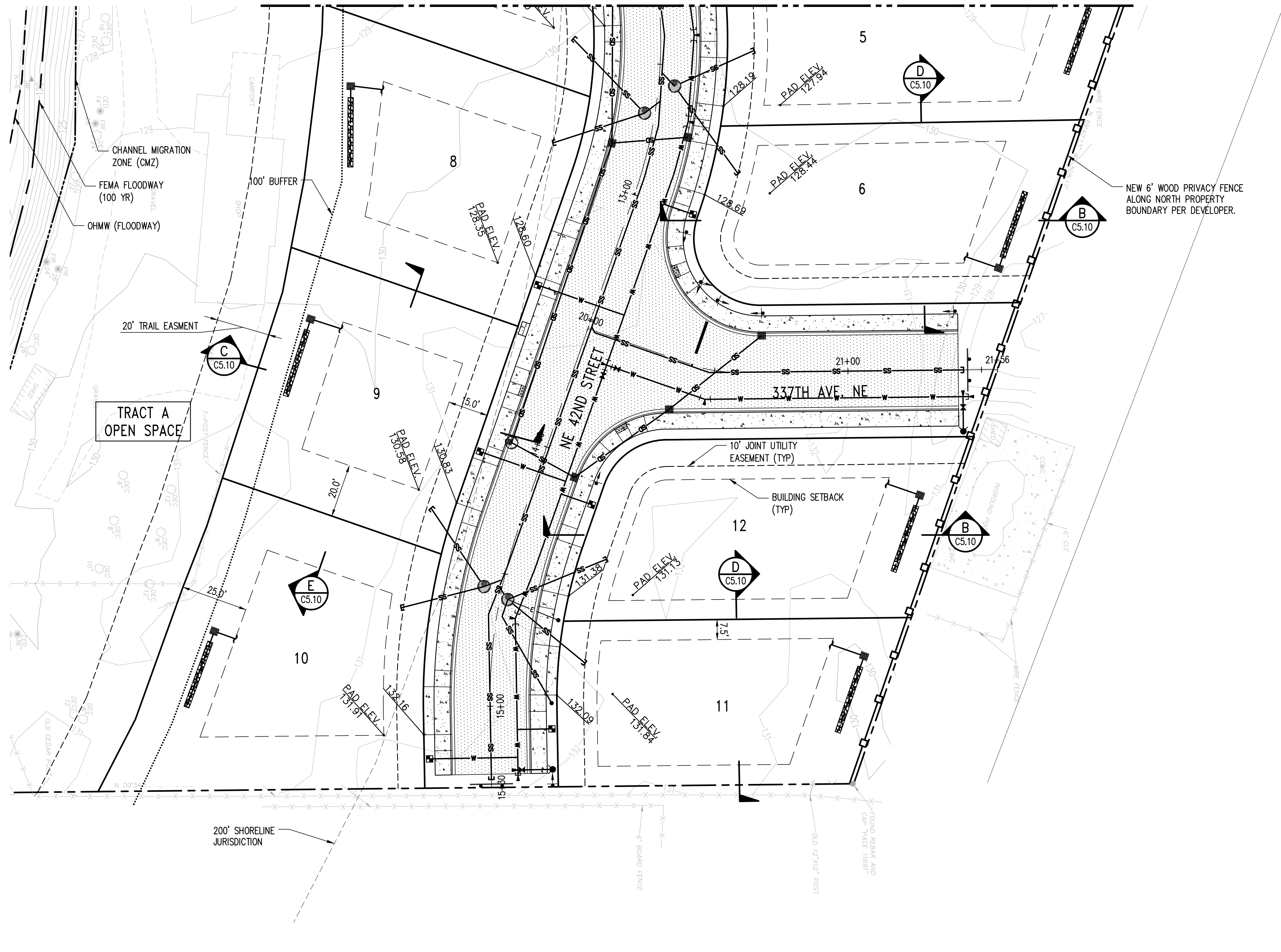
TOLT PLACE
CARNATION, WASHINGTON

LOT GRADING & DRAINAGE PLAN

SHEET
C5.00

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.

SEE SHEET C5.00 FOR CONTINUATION

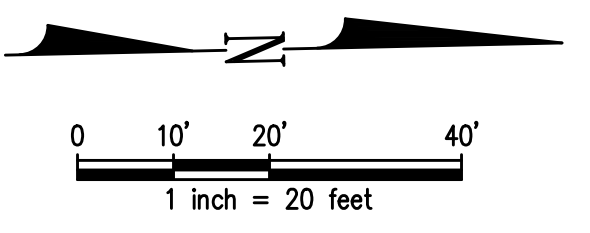


LOT GRADING AND DRAINAGE NOTES:

1. ALL VEGETATION, ORGANIC SURFACE SOILS, AND OTHER DELETERIOUS MATERIALS SHALL BE REMOVED FROM SITE.
2. ROADWAY CONTOURS ARE SHOWN HERE FOR REFERENCE. SEE ROAD AND DRAINAGE PLANS FOR ROAD GRADING AND SECTIONS.
3. CONTOURS AND FINISH PAD ELEVATIONS ON LOTS ARE STRUCTURAL PAD ELEVATIONS.
4. ALL CUT/FILL SLOPES SHALL BE MAX 3H:1V.
5. THE APPROXIMATE IMPERVIOUS AREA OF EACH LOT IS 2,800 SF. THE PRELIMINARY INFILTRATION TRENCH SIZE FOR EACH LOT IS 26 FEET PER DETAIL 1 ON SHEET C6.13. INFILTRATION TRENCH SIZES AND LOCATIONS SHOWN ARE PRELIMINARY. FINAL SIZE AND LOT LOCATION WILL BE DETERMINED AT THE TIME OF BUILDING PERMIT. INFILTRATION TRENCH SHALL BE CONSTRUCTED WITH BUILDING CONSTRUCTION.
6. ANY FILL SOIL PLACED BENEATH A FOUNDATION, RETAINING WALL, ROADWAY OR DRIVEWAY MUST BE CONSTRUCTED AS A STRUCTURAL FILL. ANY EXISTING FILL SOILS OR LOOSE SOILS SHOULD BE REMOVED AND REPLACED WITH STRUCTURAL FILL PER THE PROJECT GEOTECHNICAL REPORT PREPARED BY SOUTH FORK GEOSCIENCES.

LEGEND

- WATER MAIN
- WATER METER
- FIRE HYDRANT
- SANITARY SEWER MAIN (SS)
- SIDE SEWER STUB
- VALVE PIT
- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE/ROW LINE
- CENTERLINE
- BUILDING SET BACK LINE
- EASEMENT LINE
- WETLAND BUFFER LINE
- CHANNEL MIGRATION ZONE (CMZ)
- OHWM (TRIBUTARY SIDE CHANNEL)
- SHORELINE JURISDICTION
- SHORELINE BUFFER
- FEMA FLOODWAY (100 YR FLOOD PLAN)
- WOOD FENCE

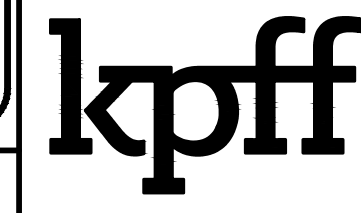


Jun 06, 2023 - 9:20am
 RossC
 Z:\2000001-2009999\2000639 Toll Place\CAD\Design\CD-C77\CD C5.00 GD.dwg

NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD
 CHECKED BY WTJ
 DESIGNED BY WTJ
 APPROVED BY JSF
 DATE 12/22/2022
 J O B No. :2000639

CALL TWO BUSINESS
 DAYS BEFORE YOU DIG
 1-800-424-5555



1601 5th Avenue, Suite 1600
 Seattle, WA 98101
 206.622.5822
 www.kpff.com



06/06/2023

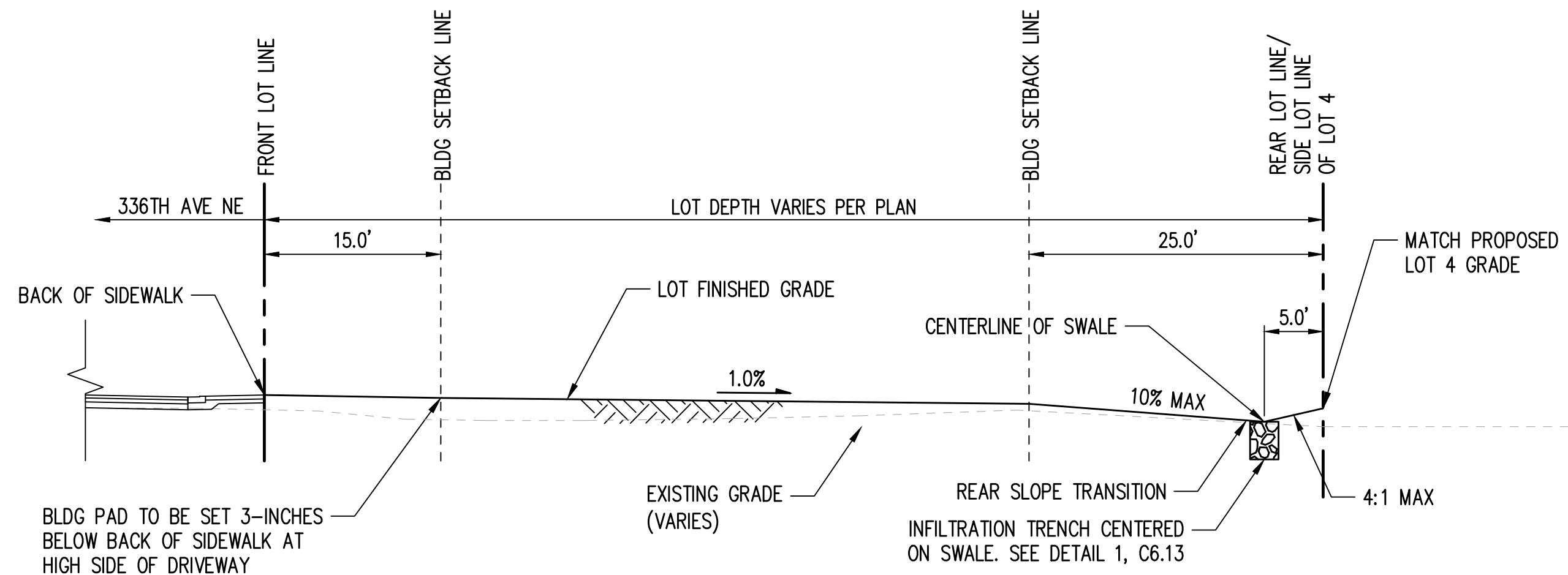
TOLT PLACE
 CARNATION, WASHINGTON

LOT GRADING & DRAINAGE PLAN

SHEET

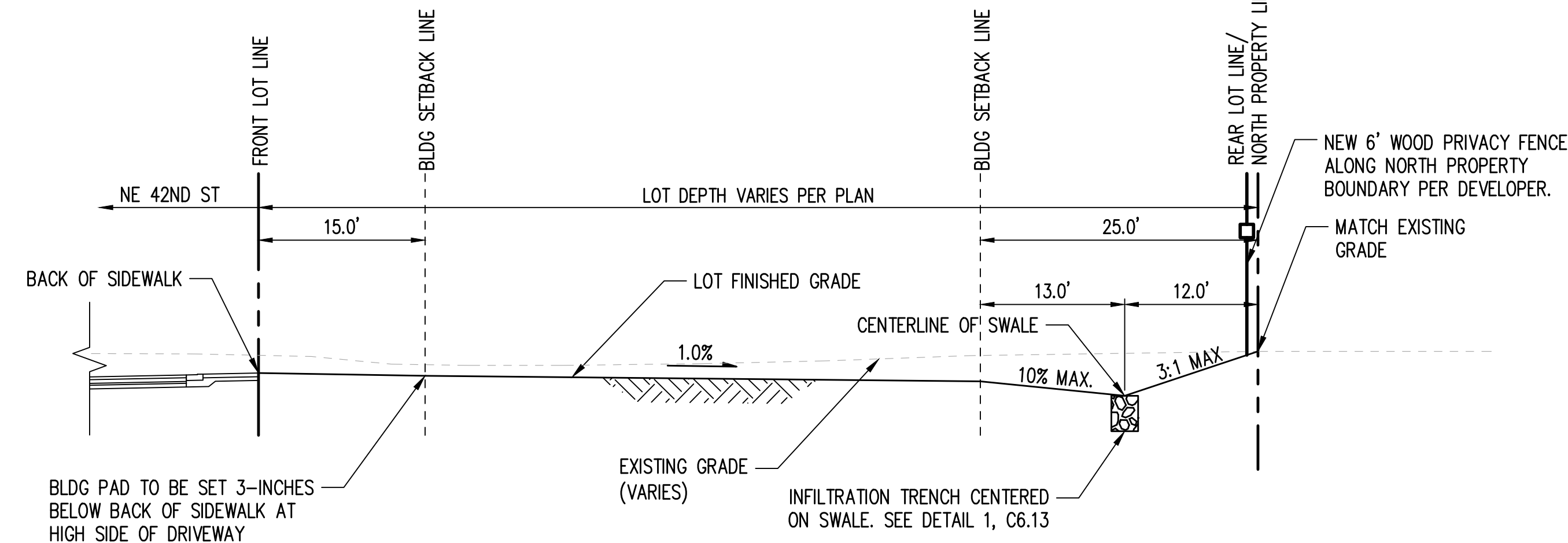
C5.01

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.



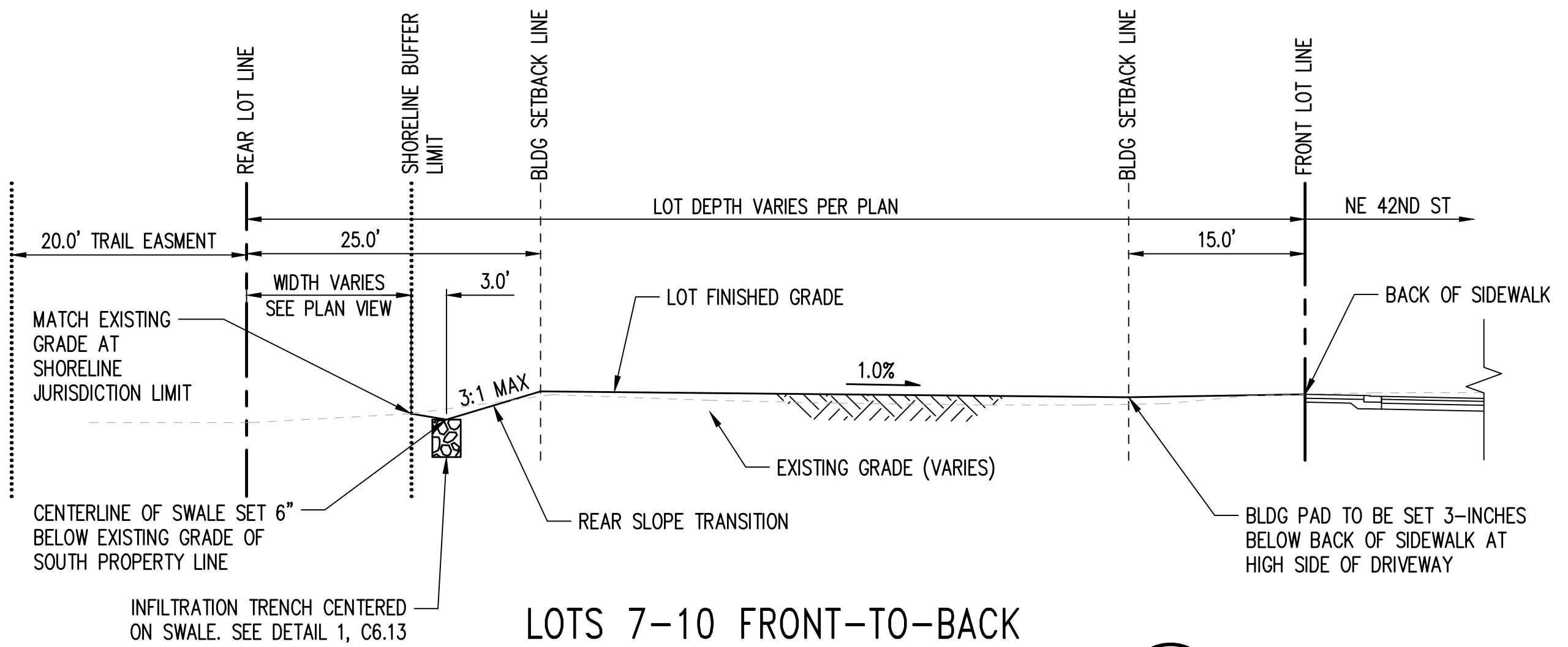
LOTS 1-3 FRONT-TO-BACK GRADING SECTION

SCALE: 1" = 10' C5.00



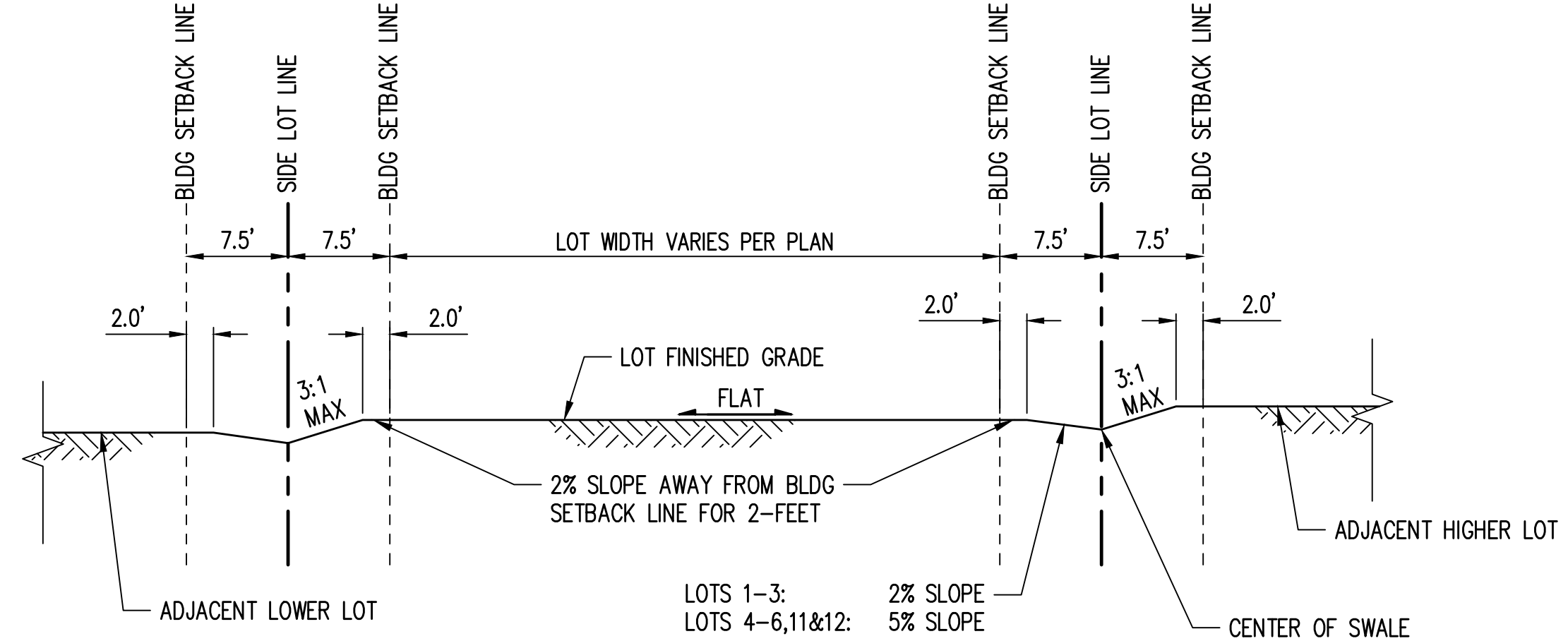
LOTS 4-6 & 11-12 FRONT-TO-BACK GRADING SECTION

SCALE: 1" = 10' C5.00-C5.01



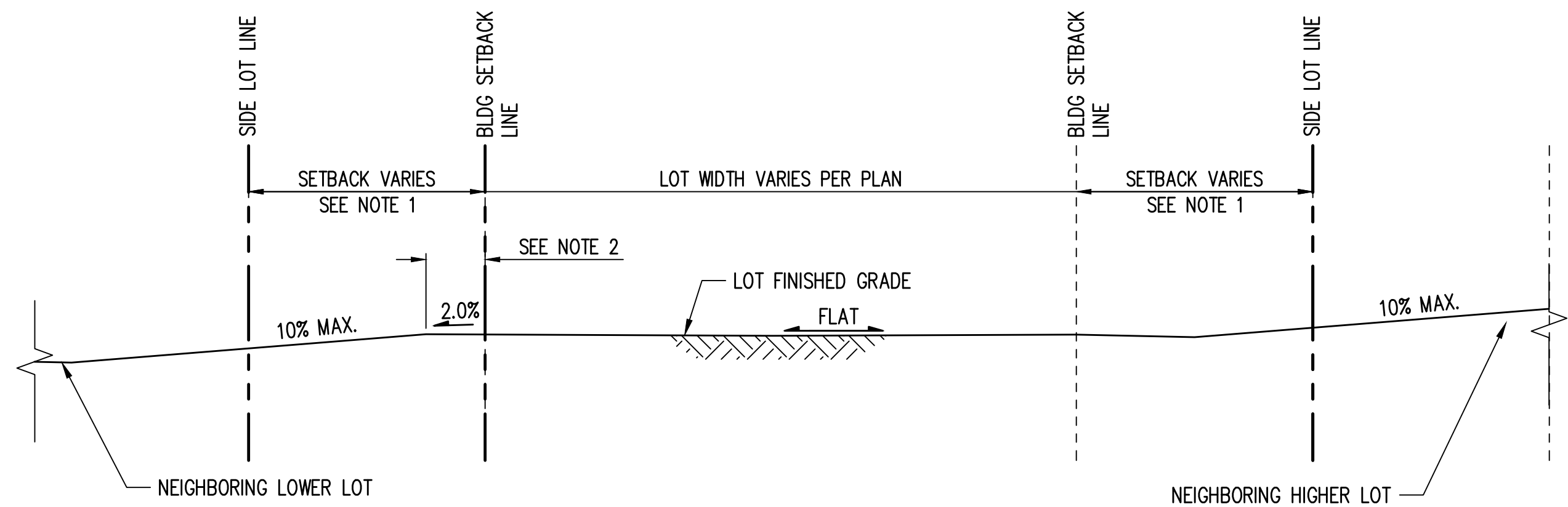
LOTS 7-10 FRONT-TO-BACK GRADING SECTION

SCALE: 1" = 10' C5.00-C5.01



LOTS 1-6 & 11-12 TYPICAL SIDE-TO-SIDE GRADING SECTION

SCALE: 1" = 10' C5.00-C5.01



LOTS 7-10 TYPICAL SIDE-TO-SIDE GRADING SECTION

SCALE: 1" = 10' C5.00-C5.01

LOT GRADING NOTES:

- SEE SHEET C1.00 FOR LOT SETBACK DATA
- FOR LOTS 4-6 AND 11 AND 12, PROVIDE A MINIMUM 2-FOOT DISTANCE FROM BLDG SETBACK LINE FOR 2% SLOPE. LOTS 7-10, PROVIDE A MINIMUM 5-FOOT DISTANCE FROM BLDG SETBACK LINE FOR 2% SLOPE
- ANY FILL SOIL PLACED BENEATH A FOUNDATION, RETAINING WALL, ROADWAY OR DRIVEWAY MUST BE CONSTRUCTED AS A STRUCTURAL FILL. ANY EXISTING FILL SOILS OR LOOSE SOILS SHOULD BE REMOVED AND REPLACED WITH STRUCTURAL FILL PER THE PROJECT GEOTECHNICAL REPORT PREPARED BY SOUTH FORK GEOSCIENCES.

Z:\2000001-2009999\2000639 Toll Place\CAD\Design\CD-CITY\CD_C5.10 SECT.dwg Jun 06, 2023 - 9:20am RossG

NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD	DESIGNED BY WTJ
CHECKED BY WTJ	APPROVED BY JSF
DATE 12/22/2022	
JOB No. :2000639	

CALL TWO BUSINESS DAYS BEFORE YOU DIG 1-800-424-5555

SCALE: AS NOTED



1601 5th Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
www.kpff.com



TOLT PLACE
CARNATION, WASHINGTON

LOT GRADING SECTIONS

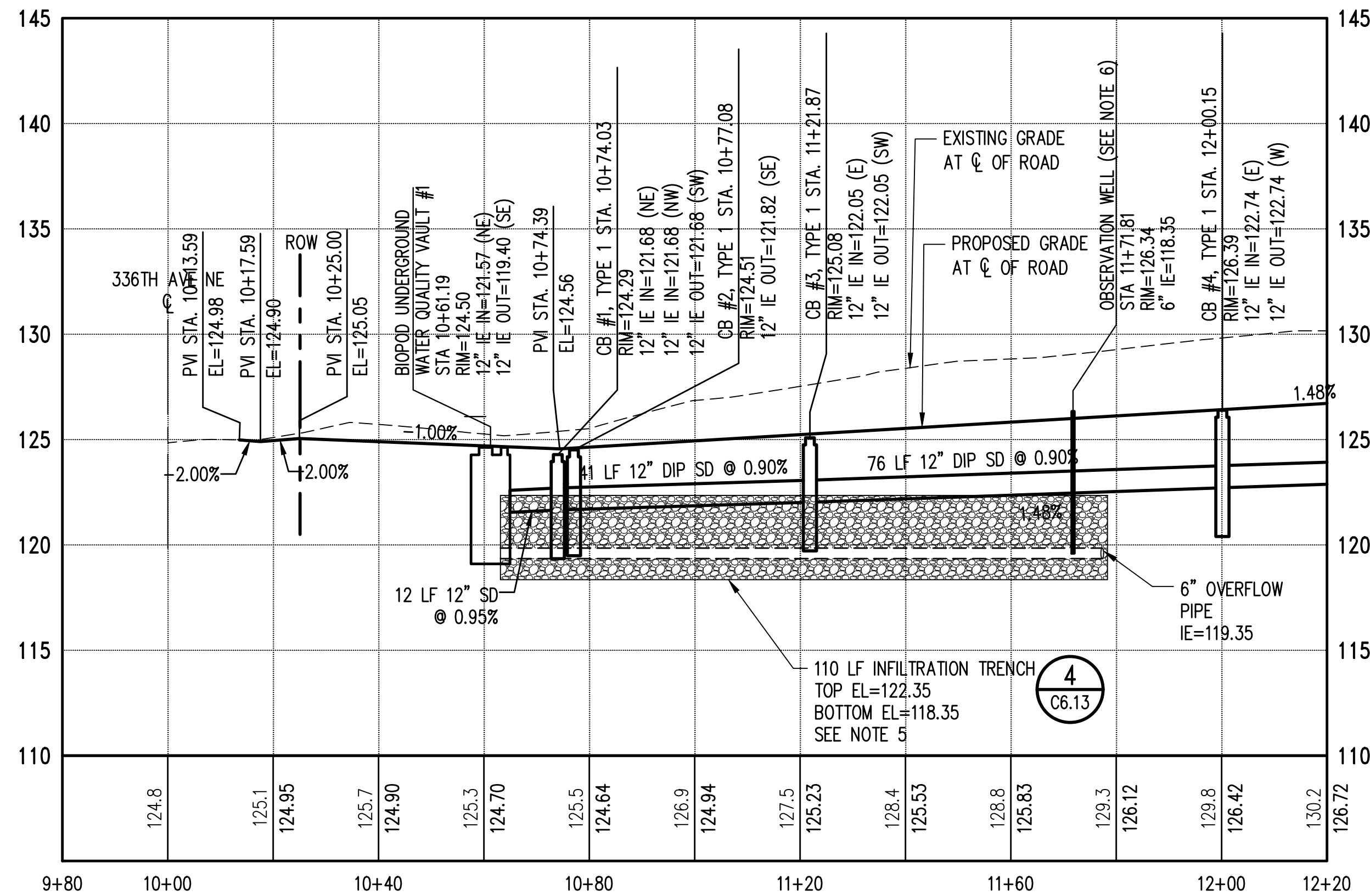
SHEET
C5.10

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.

CUT/FILL:

PRELIMINARY CUT QUANTITY: 5,896 CF
 PRELIMINARY FILL QUANTITY: 852 CF

• PRELIMINARY CUT AND FILL QUANTITIES ARE COMPARISON OF PROPOSED AND EXISTING GRADE CHANGES AND DO NOT ACCOUNT FOR STRIPPING.

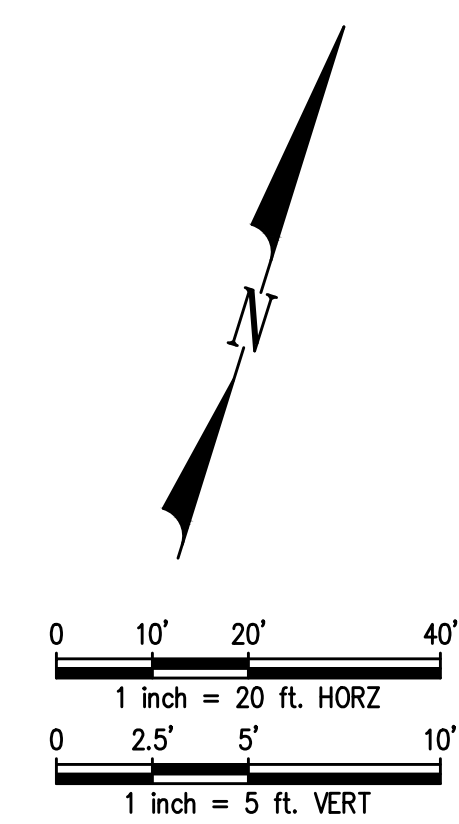
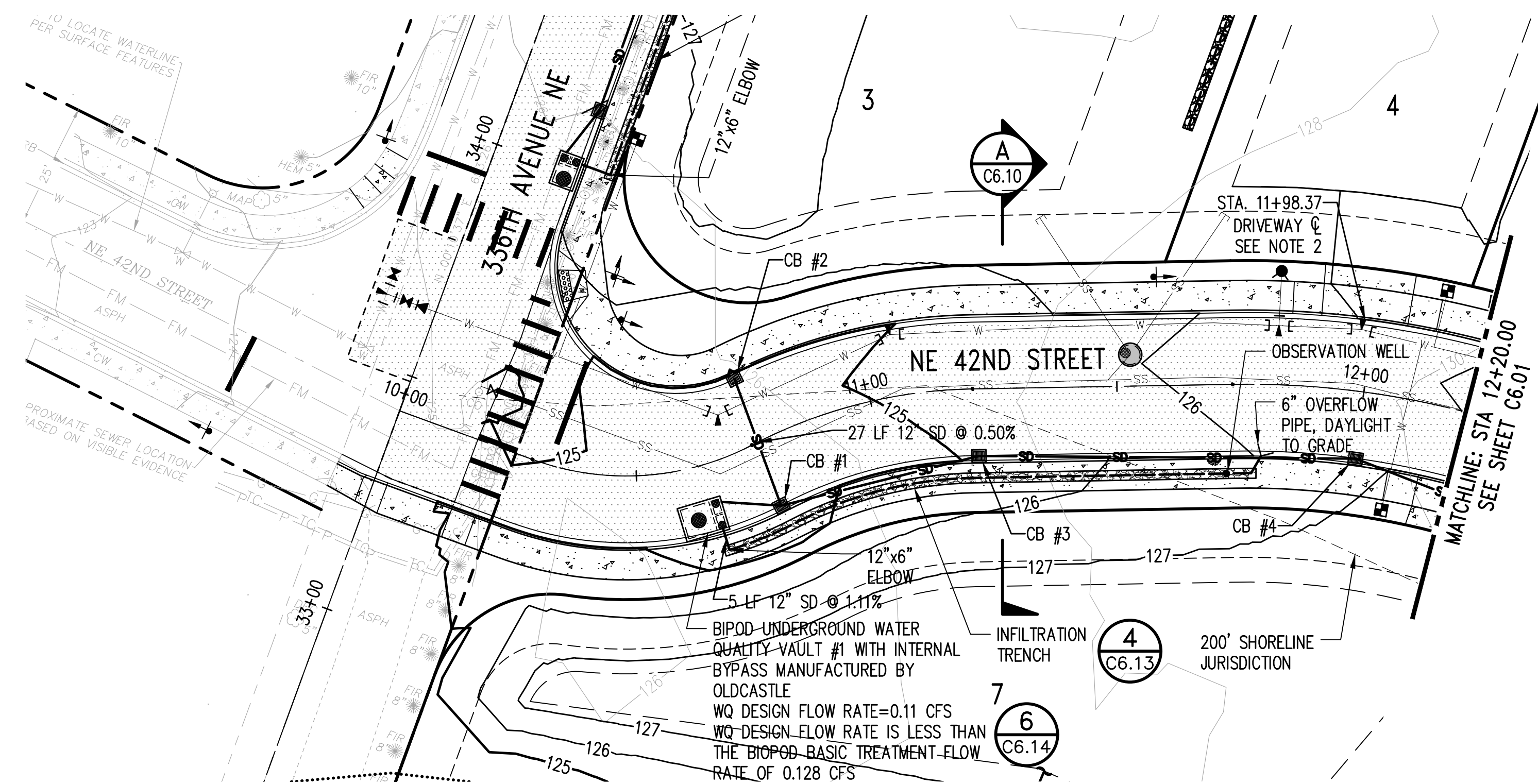


GRADING AND DRAINAGE NOTES:

- CONSTRUCTION STORMWATER RUNOFF SHALL NOT BE PERMITTED WITHIN INFILTRATION TRENCHES. CONTRACTOR SHALL ROUTE CONSTRUCTION RUNOFF TO BYPASS INFILTRATION TRENCHES AND BE RESPONSIBLE FOR FIXING ANY INFILTRATION TRENCHES DAMAGED BY CONSTRUCTION RUNOFF. THE SITE SHALL BE PERMANENTLY STABILIZED PRIOR TO DIRECTING ANY STORMWATER RUNOFF TO THE INFILTRATION TRENCHES. CONTRACTOR SHALL MAINTAIN CONSTRUCTION STORMWATER BMPS UNTIL SITE IS FULLY STABILIZED, AS APPROVED BY THE OWNER.
- ALL DRIVEWAYS SHALL BE 18-FOOT WIDE. LOTS 1 THROUGH 6 AND LOTS 11 AND 12 DRIVEWAYS SHALL BE TYPE 1 PER WSDOT STANDARD PLAN F-80.10-04. LOTS 7 THROUGH 10 DRIVEWAYS SHALL BE TYPE 4 PER WSDOT STANDARD PLAN F-80.10-04. ALL DRIVEWAYS SHALL BE LOCATED A MINIMUM OF 5' FROM A SIDE PROPERTY LINE.
- ALL NEW, REPLACED, AND DISTURBED TOPSOIL SHALL BE AMENDED WITH ORGANIC MATTER IN ACCORDANCE WITH BMP 15.13 OF THE DEPARTMENT OF ECOLOGY STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON. FOR UNDISTURBED AREAS ON-SITE, THE DUFF LAYER AND NATIVE TOPSOIL SHALL BE RETAINED TO THE MAXIMUM EXTENT PRACTICABLE.
- ALIGN TOP EDGE OF CATCH BASIN GRATES WITH THE FACE OF CURB.
- PER THE MAXIMUM GROUNDWATER ELEVATION LETTER, PREPARED BY SOUTH FORK GEOSCIENCES, PLLC, DATED MAY 22, 2023, THE GROUNDWATER ELEVATION AT THE WEST SIDE OF THE SITE WHERE THE INFILTRATION TRENCHES ARE LOCATED, IS APPROXIMATELY 114 FEET. THIS ELEVATION IS MINIMUM 3 FEET BELOW THE BOTTOM ELEVATION OF THE INFILTRATION TRENCHES.
- CONTRACTOR TO PROVIDE AN OBSERVATION WELL CUT SHEET/SUBMITTAL PRIOR TO CONSTRUCTION FOR REVIEW BY THE CITY OF CARNATION INSPECTOR.

LEGEND

- WATER MAIN
- WATER METER
- FIRE HYDRANT
- SANITARY SEWER MAIN (SS)
- SIDE SEWER STUB
- VALVE PIT
- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE/ROW LINE
- CENTERLINE
- BUILDING SET BACK LINE
- EASEMENT LINE
- WETLAND BUFFER LINE
- CHANNEL MIGRATION ZONE (CMZ)
- OHWM (TRIBUTARY SIDE CHANNEL)
- SHORELINE JURISDICTION
- SHORELINE BUFFER
- FEMA FLOODWAY (100 YR FLOOD PLAIN)
- FULL ASPHALT PAVEMENT RESTORATION OR NEW PAVEMENT
- 2" MIN. GRIND AND OVERLAY



Z:\2000001-2009999\2000639 Toll Place\CAD\Design\CD-CITY\CD C6.00 GD PP.dwg Jun 06, 2023 - 9:21am RossC

NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD
 DESIGNED BY WTJ
 CHECKED BY WTJ
 APPROVED BY JSF
 DATE 12/22/2022
 J O B No. :2000639

CALL TWO BUSINESS DAYS BEFORE YOU DIG 1-800-424-5555

SCALE: AS NOTED

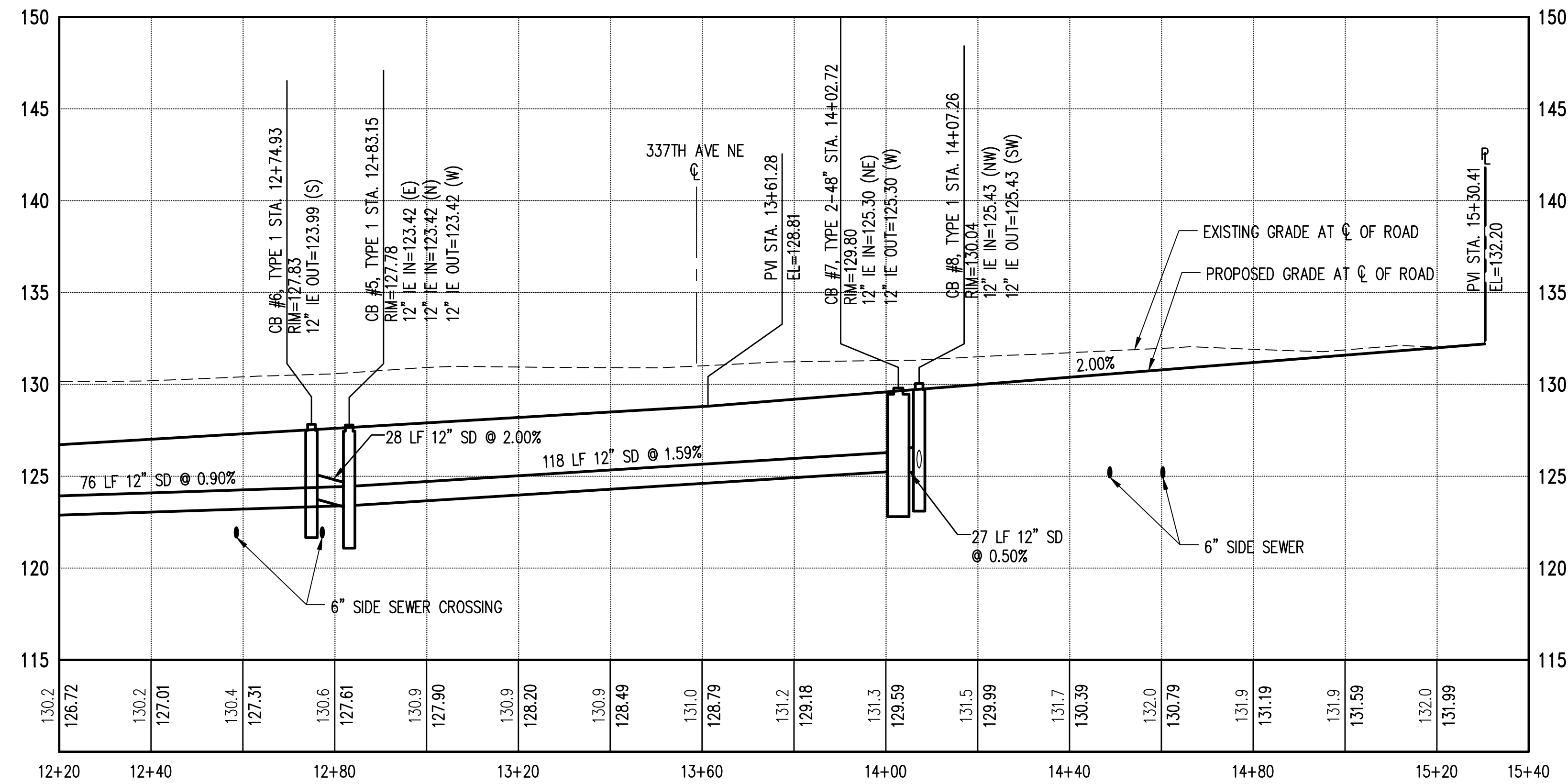


TOLT PLACE
 CARNATION, WASHINGTON

NE 42ND STREET GRADING & DRAINAGE PLAN AND PROFILE

SHEET
C6.00

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.

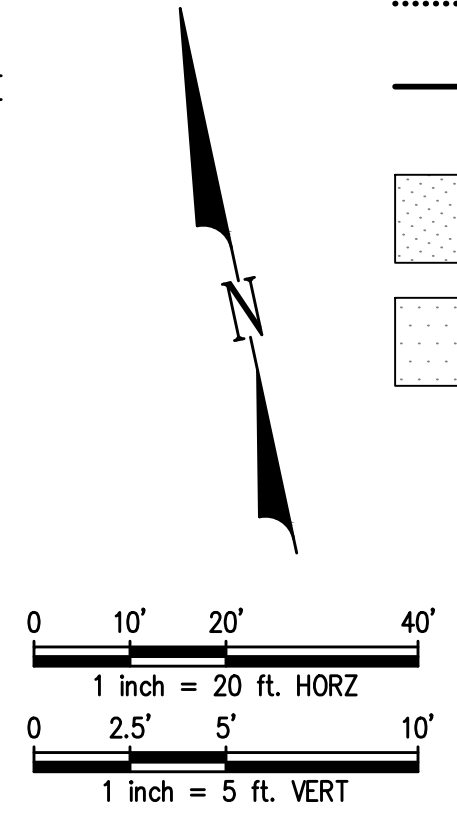
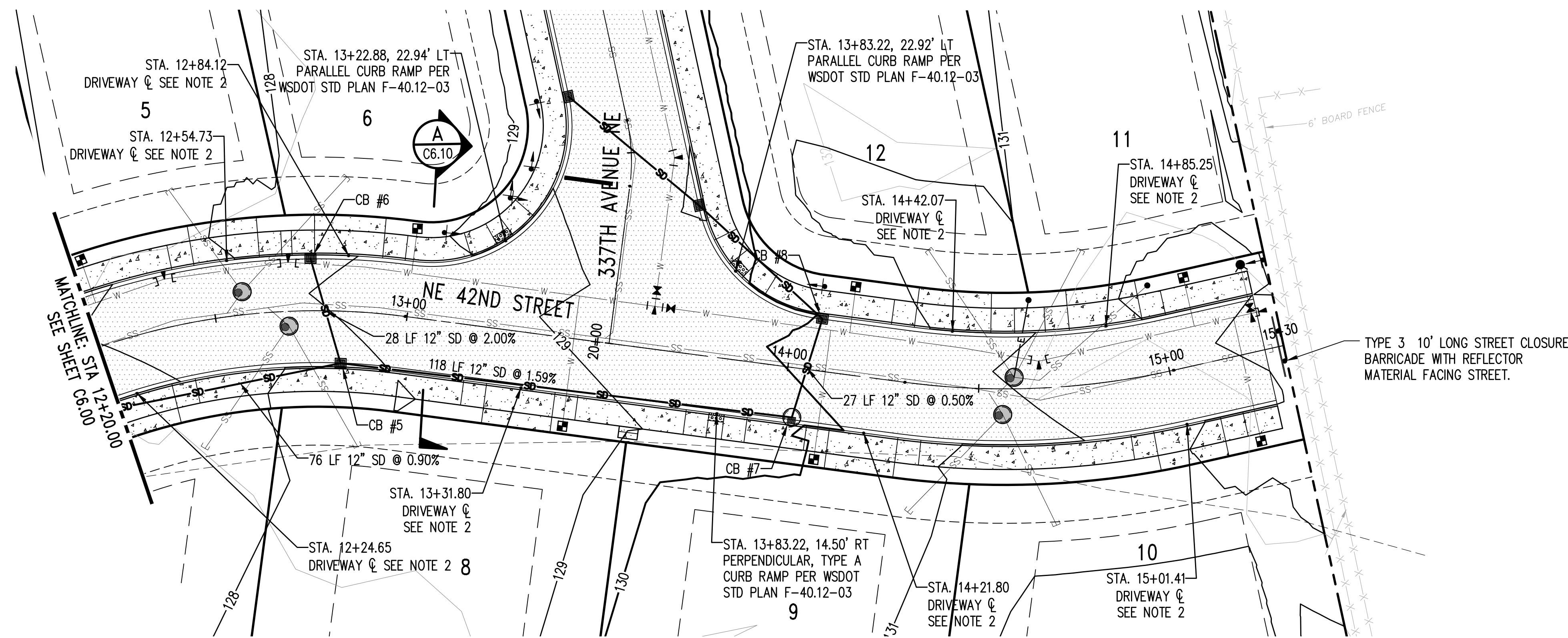


GRADING AND DRAINAGE NOTES:

- CONSTRUCTION STORMWATER RUNOFF SHALL NOT BE PERMITTED WITHIN INFILTRATION TRENCHES. CONTRACTOR SHALL ROUTE CONSTRUCTION RUNOFF TO BYPASS INFILTRATION TRENCHES AND BE RESPONSIBLE FOR FIXING ANY INFILTRATION TRENCHES DAMAGED BY CONSTRUCTION RUNOFF. THE SITE SHALL BE PERMANENTLY STABILIZED PRIOR TO DIRECTING ANY STORMWATER RUNOFF TO THE INFILTRATION TRENCHES. CONTRACTOR SHALL MAINTAIN CONSTRUCTION STORMWATER BMPs UNTIL SITE IS FULLY STABILIZED, AS APPROVED BY THE OWNER.
- ALL DRIVEWAYS SHALL BE 18-FOOT WIDE. LOTS 1 THROUGH 6 AND LOTS 11 AND 12 DRIVEWAYS SHALL BE TYPE 1 PER WSDOT STANDARD PLAN F-80.10-04. LOTS 7 THROUGH 10 DRIVEWAYS SHALL BE TYPE 4 PER WSDOT STANDARD PLAN F-80.10-04. ALL DRIVEWAYS SHALL BE LOCATED A MINIMUM OF 5' FROM A SIDE PROPERTY LINE.
- ALL NEW, REPLACED, AND DISTURBED TOPSOIL SHALL BE AMENDED WITH ORGANIC MATTER IN ACCORDANCE WITH BMP T5.13 OF THE DEPARTMENT OF ECOLOGY STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON. FOR UNDISTURBED AREAS ON-SITE, THE DUFF LATER AND NATIVE TOPSOIL SHALL BE RETAINED TO THE MAXIMUM EXTENT PRACTICABLE.
- ALIGN TOP EDGE OF CATCH BASIN GRATES WITH THE FACE OF CURB.
- PER THE MAXIMUM GROUNDWATER ELEVATION LETTER, PREPARED BY SOUTH FORK GEOSCIENCES, PLLC, DATED MAY 22, 2023, THE GROUNDWATER ELEVATION AT THE WEST SIDE OF THE SITE WHERE THE INFILTRATION TRENCHES ARE LOCATED, IS APPROXIMATELY 114 FEET. THIS ELEVATION IS MINIMUM 3 FEET BELOW THE BOTTOM ELEVATION OF THE INFILTRATION TRENCHES.

LEGEND

- WATER MAIN
- WATER METER
- FIRE HYDRANT
- SANITARY SEWER MAIN (SS)
- SIDE SEWER STUB
- VALVE PIT
- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE/ROW LINE
- CENTERLINE
- BUILDING SET BACK LINE
- EASEMENT LINE
- WETLAND BUFFER LINE
- CHANNEL MIGRATION ZONE (CMZ)
- OHWM (TRIBUTARY SIDE CHANNEL)
- SHORELINE JURISDICTION
- SHORELINE BUFFER
- FEMA FLOODWAY (100 YR FLOOD PLAIN)
- FULL ASPHALT PAVEMENT RESTORATION OR NEW PAVEMENT
- 2" MIN. GRIND AND OVERLAY



Z:\2000001-2009999\2000639 Toll Place\CAD\Design\CD-CITY\CD_C6.00_GD_PP.dwg Jun 06, 2023 - 9:21am RossC

NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD
 DESIGNED BY WTJ
 CHECKED BY WTJ
 APPROVED BY JSF
 DATE 12/22/2022
 J O B No. :2000639

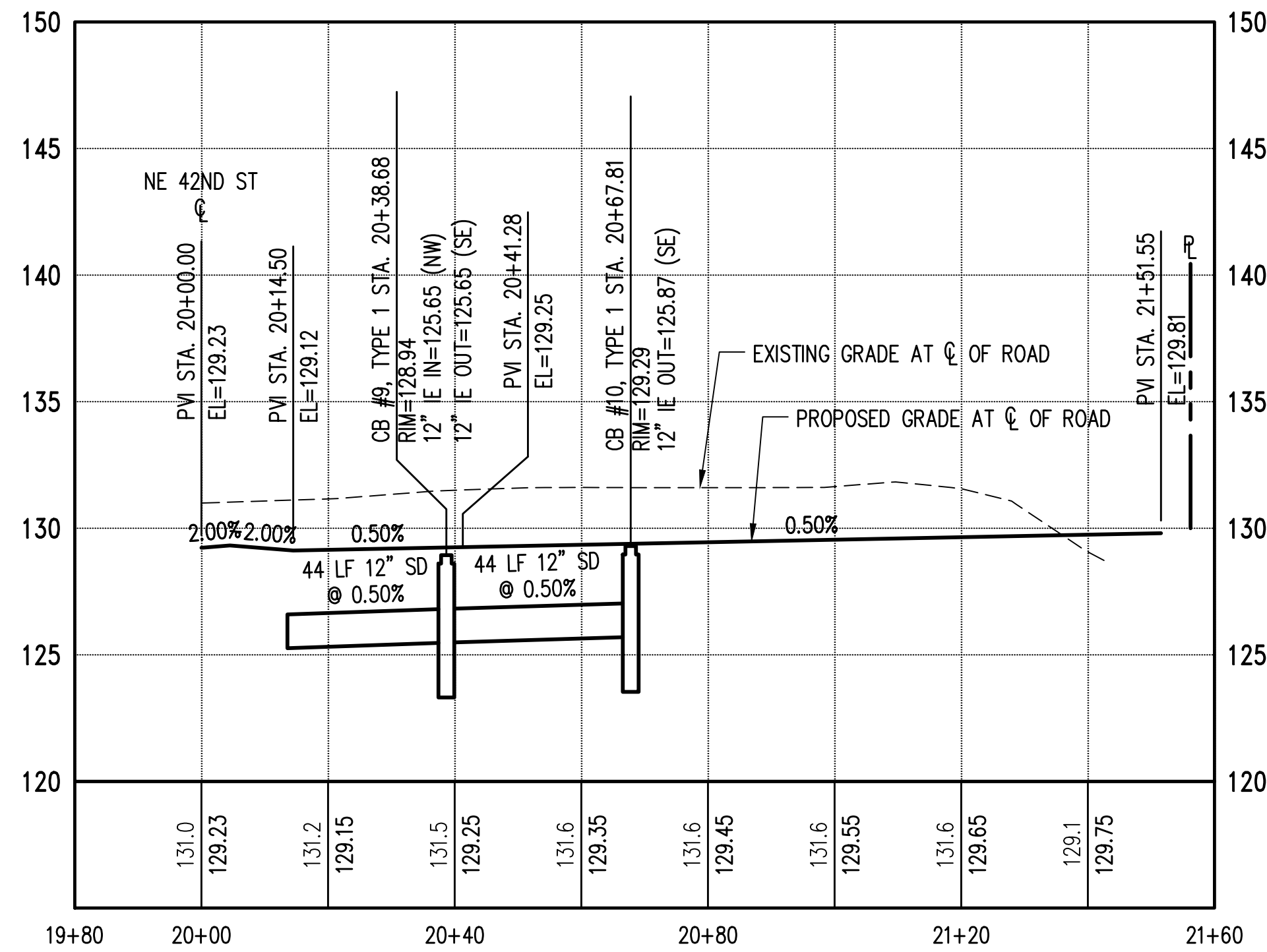
CALL TWO BUSINESS DAYS BEFORE YOU DIG 1-800-424-5555
 SCALE: AS NOTED



TOLT PLACE
 CARNATION, WASHINGTON
 NE 42ND STREET GRADING & DRAINAGE PLAN AND PROFILE

SHEET
C6.01

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.

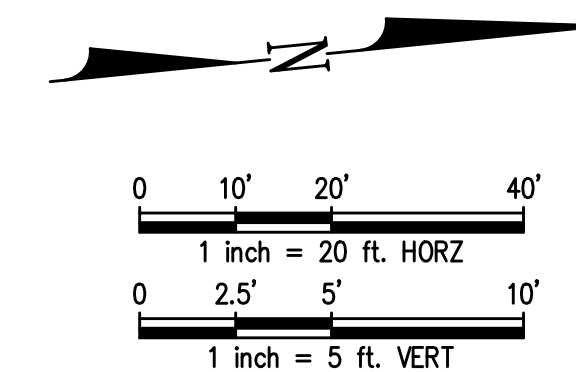
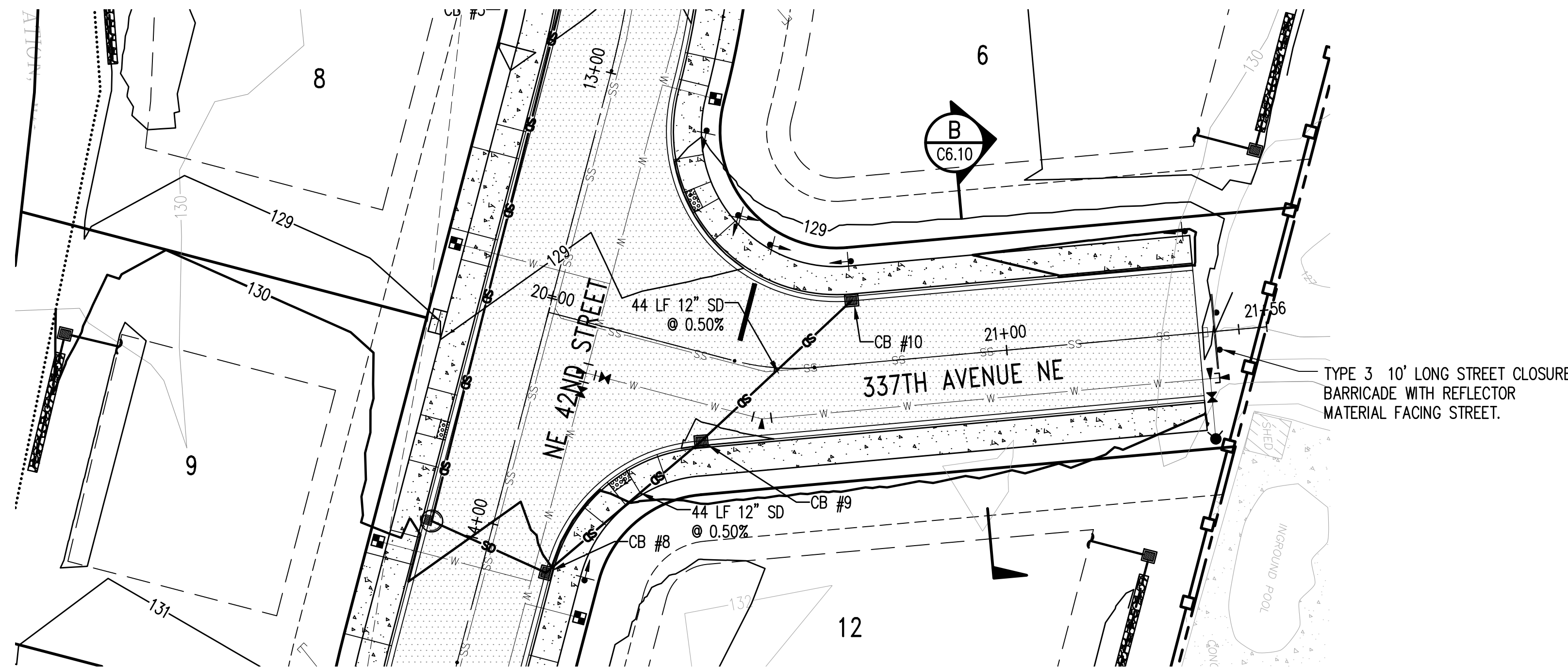


GRADING AND DRAINAGE NOTES:

- CONSTRUCTION STORMWATER RUNOFF SHALL NOT BE PERMITTED WITHIN INFILTRATION TRENCHES. CONTRACTOR SHALL ROUTE CONSTRUCTION RUNOFF TO BYPASS INFILTRATION TRENCHES AND BE RESPONSIBLE FOR FIXING ANY INFILTRATION TRENCHES DAMAGED BY CONSTRUCTION RUNOFF. THE SITE SHALL BE PERMANENTLY STABILIZED PRIOR TO DIRECTING ANY STORMWATER RUNOFF TO THE INFILTRATION TRENCHES. CONTRACTOR SHALL MAINTAIN CONSTRUCTION STORMWATER BMPs UNTIL SITE IS FULLY STABILIZED, AS APPROVED BY THE OWNER.
- ALL DRIVEWAYS SHALL BE 18-FOOT WIDE LOTS 1 THROUGH 6 AND LOTS 11 AND 12 DRIVEWAYS SHALL BE TYPE 1 PER WSDOT STANDARD PLAN F-80.10-04. LOTS 7 THROUGH 10 DRIVEWAYS SHALL BE TYPE 4 PER WSDOT STANDARD PLAN F-80.10-04. ALL DRIVEWAYS SHALL BE LOCATED A MINIMUM OF 5' FROM A SIDE PROPERTY LINE.
- ALL NEW, REPLACED, AND DISTURBED TOPSOIL SHALL BE AMENDED WITH ORGANIC MATTER IN ACCORDANCE WITH BMP T5.13 OF THE DEPARTMENT OF ECOLOGY STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON. FOR UNDISTURBED AREAS ON-SITE, THE DUFF LAYER AND NATIVE TOPSOIL SHALL BE RETAINED TO THE MAXIMUM EXTENT PRACTICABLE.
- ALIGN TOP EDGE OF CATCH BASIN GRATES WITH THE FACE OF CURB.
- PER THE MAXIMUM GROUNDWATER ELEVATION LETTER, PREPARED BY SOUTH FORK GEOSCIENCES, PLLC, DATED MAY 22, 2023, THE GROUNDWATER ELEVATION AT THE WEST SIDE OF THE SITE WHERE THE INFILTRATION TRENCHES ARE LOCATED, IS APPROXIMATELY 114 FEET. THIS ELEVATION IS MINIMUM 3 FEET BELOW THE BOTTOM ELEVATION OF THE INFILTRATION TRENCHES.

LEGEND

- WATER MAIN
- WATER METER
- FIRE HYDRANT
- SANITARY SEWER MAIN (SS)
- SIDE SEWER STUB
- VALVE PIT
- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE/ROW LINE
- CENTERLINE
- BUILDING SET BACK LINE
- EASEMENT LINE
- WETLAND BUFFER LINE
- CHANNEL MIGRATION ZONE (CMZ)
- OHWM (TRIBUTARY SIDE CHANNEL)
- SHORELINE JURISDICTION
- SHORELINE BUFFER
- FEMA FLOODWAY (100 YR FLOOD PLAIN)
- FULL ASPHALT PAVEMENT RESTORATION OR NEW PAVEMENT
- 2" MIN. GRIND AND OVERLAY



Z:\2000001-2009999\2000639_Tolt Place\CAD\Design\CD-CITY\CD_C6.00_GD_PP.dwg

Jun 06, 2023 - 9:21am RossC

NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD	DESIGNED BY WTJ
CHECKED BY WTJ	APPROVED BY JSF
DATE 12/22/2022	
J O B No. :2000639	

CALL TWO BUSINESS DAYS BEFORE YOU DIG 1-800-424-5555

SCALE:
AS NOTED

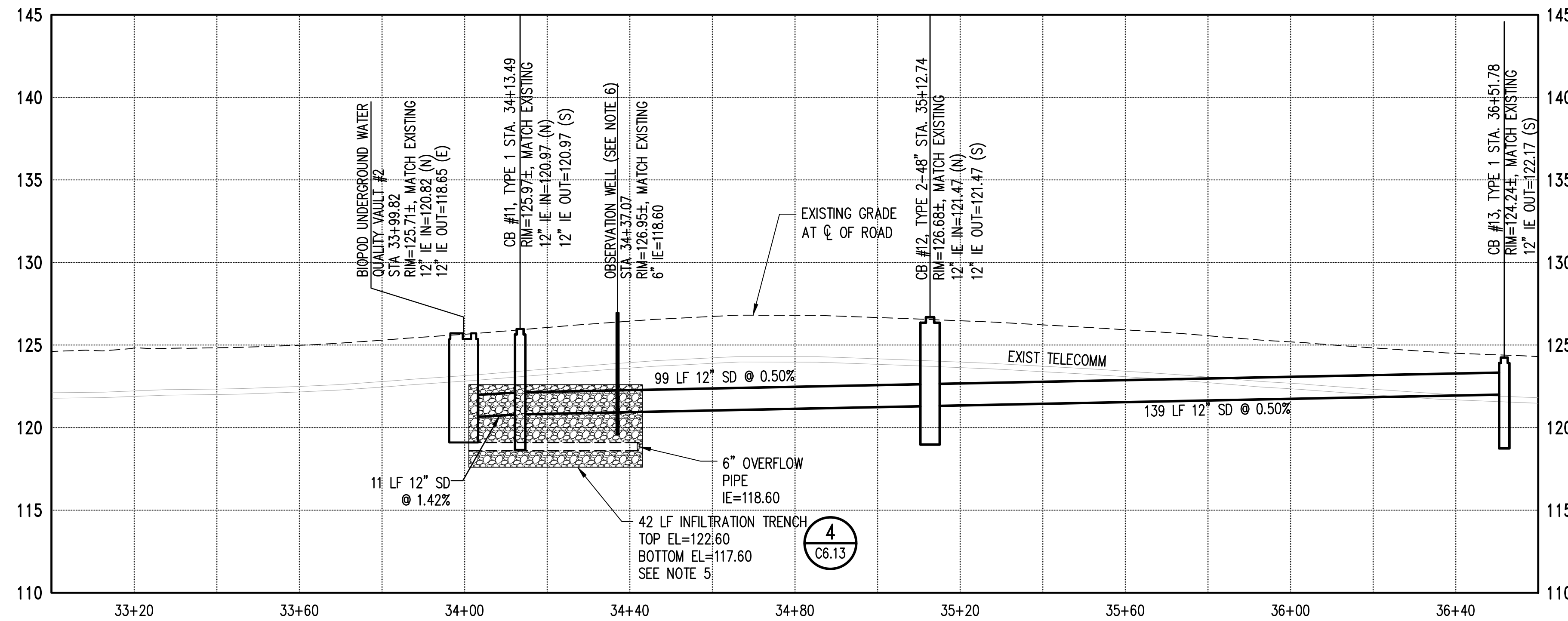
kpff
1601 5th Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
www.kpff.com

TOLT PLACE
CARNATION, WASHINGTON

337TH AVENUE NE GRADING & DRAINAGE PLAN AND PROFILE

SHEET
C6.02

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.

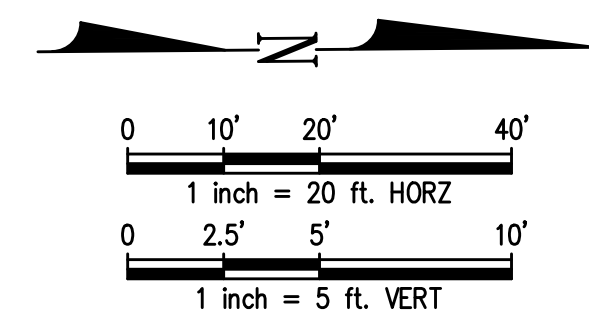
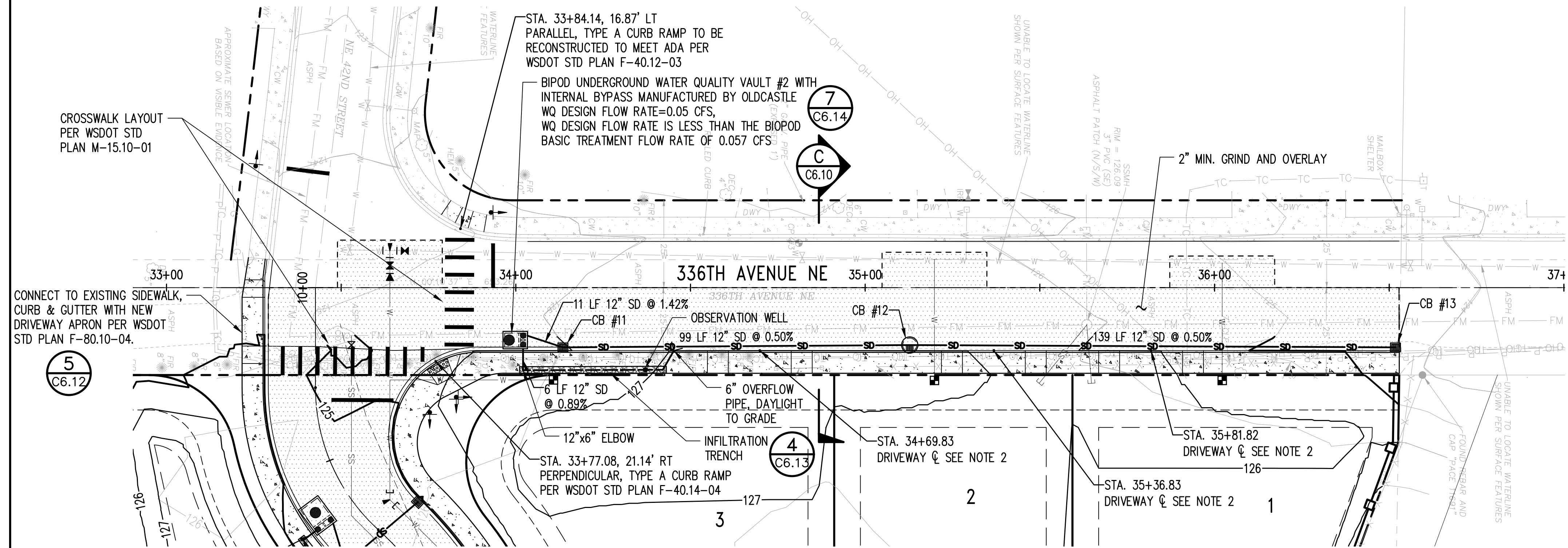


GRADING AND DRAINAGE NOTES:

- CONSTRUCTION STORMWATER RUNOFF SHALL NOT BE PERMITTED WITHIN INFILTRATION TRENCHES. CONTRACTOR SHALL ROUTE CONSTRUCTION RUNOFF TO BYPASS INFILTRATION TRENCHES AND BE RESPONSIBLE FOR FIXING ANY INFILTRATION TRENCHES DAMAGED BY CONSTRUCTION RUNOFF. THE SITE SHALL BE PERMANENTLY STABILIZED PRIOR TO DIRECTING ANY STORMWATER RUNOFF TO THE INFILTRATION TRENCHES. CONTRACTOR SHALL MAINTAIN CONSTRUCTION STORMWATER BMPS UNTIL SITE IS FULLY STABILIZED, AS APPROVED BY THE OWNER.
- ALL DRIVEWAYS SHALL BE 18-FOOT WIDE LOTS 1 THROUGH 6 AND LOTS 11 AND 12 DRIVEWAYS SHALL BE TYPE 1 PER WSDOT STANDARD PLAN F-80.10-04. LOTS 7 THROUGH 10 DRIVEWAYS SHALL BE TYPE 4 PER WSDOT STANDARD PLAN F-80.10-04. ALL DRIVEWAYS SHALL BE LOCATED A MINIMUM OF 5' FROM A SIDE PROPERTY LINE.
- ALL NEW, REPLACED, AND DISTURBED TOPSOIL SHALL BE AMENDED WITH ORGANIC MATTER IN ACCORDANCE WITH BMP 15.13 OF THE DEPARTMENT OF ECOLOGY STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON. FOR UNDISTURBED AREAS ON-SITE, THE DUFF LATER AND NATIVE TOPSOIL SHALL BE RETAINED TO THE MAXIMUM EXTENT PRACTICABLE.
- ALIGN TOP EDGE OF CATCH BASIN GRATES WITH THE FACE OF CURB.
- PER THE MAXIMUM GROUNDWATER ELEVATION LETTER, PREPARED BY SOUTH FORK GEOSCIENCES, PLLC, DATED MAY 22, 2023, THE GROUNDWATER ELEVATION AT THE WEST SIDE OF THE SITE WHERE THE INFILTRATION TRENCHES ARE LOCATED, IS APPROXIMATELY 114 FEET. THIS ELEVATION IS MINIMUM 3 FEET BELOW THE BOTTOM ELEVATION OF THE INFILTRATION TRENCHES.
- CONTRACTOR TO PROVIDE AN OBSERVATION WELL CUT SHEET/SUBMITTAL PRIOR TO CONSTRUCTION FOR REVIEW BY THE CITY OF CARNATION INSPECTOR.

LEGEND

- WATER MAIN
- WATER METER
- FIRE HYDRANT
- SANITARY SEWER MAIN (SS)
- SIDE SEWER STUB
- VALVE PIT
- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE/ROW LINE
- CENTERLINE
- BUILDING SET BACK LINE
- EASEMENT LINE
- WETLAND BUFFER LINE
- CHANNEL MIGRATION ZONE (CMZ)
- OHWM (TRIBUTARY SIDE CHANNEL)
- SHORELINE JURISDICTION
- SHORELINE BUFFER
- FEMA FLOODWAY (100 YR FLOOD PLAIN)
- FULL ASPHALT PAVEMENT RESTORATION OR NEW PAVEMENT
- 2" MIN. GRIND AND OVERLAY



Z:\20000001-2009999\2000639_Toll Place\CAD\Design\CD-CITY\CD_C6.00_GD_PP.dwg
Jun 06, 2023 - 9:21am
RossC

NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD
DESIGNED BY WTJ
CHECKED BY WTJ
APPROVED BY JSF
DATE 12/22/2022
J O B No. :2000639

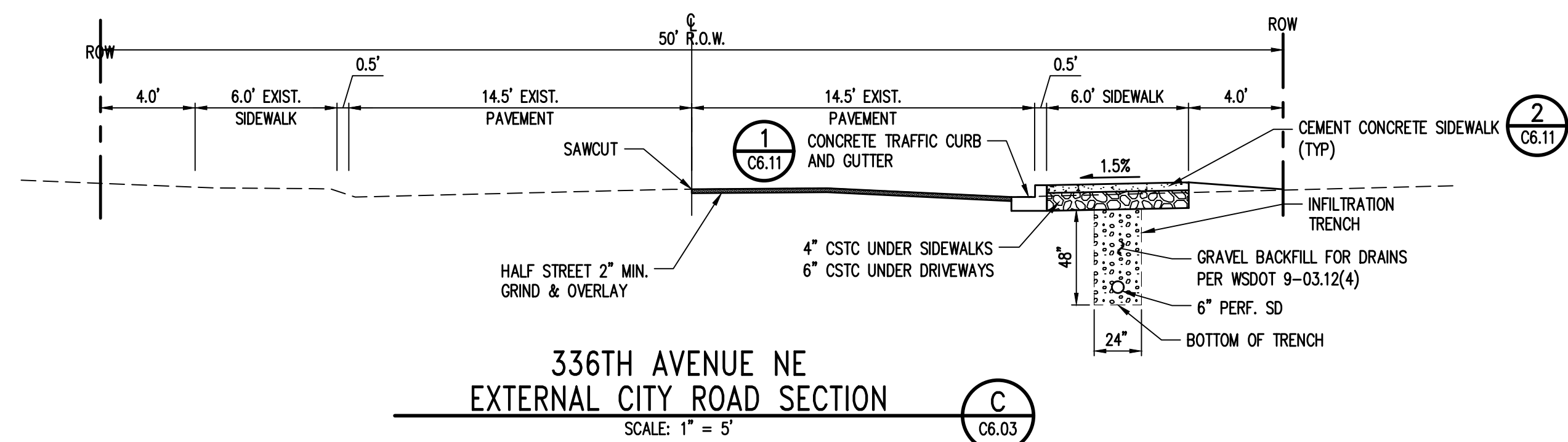
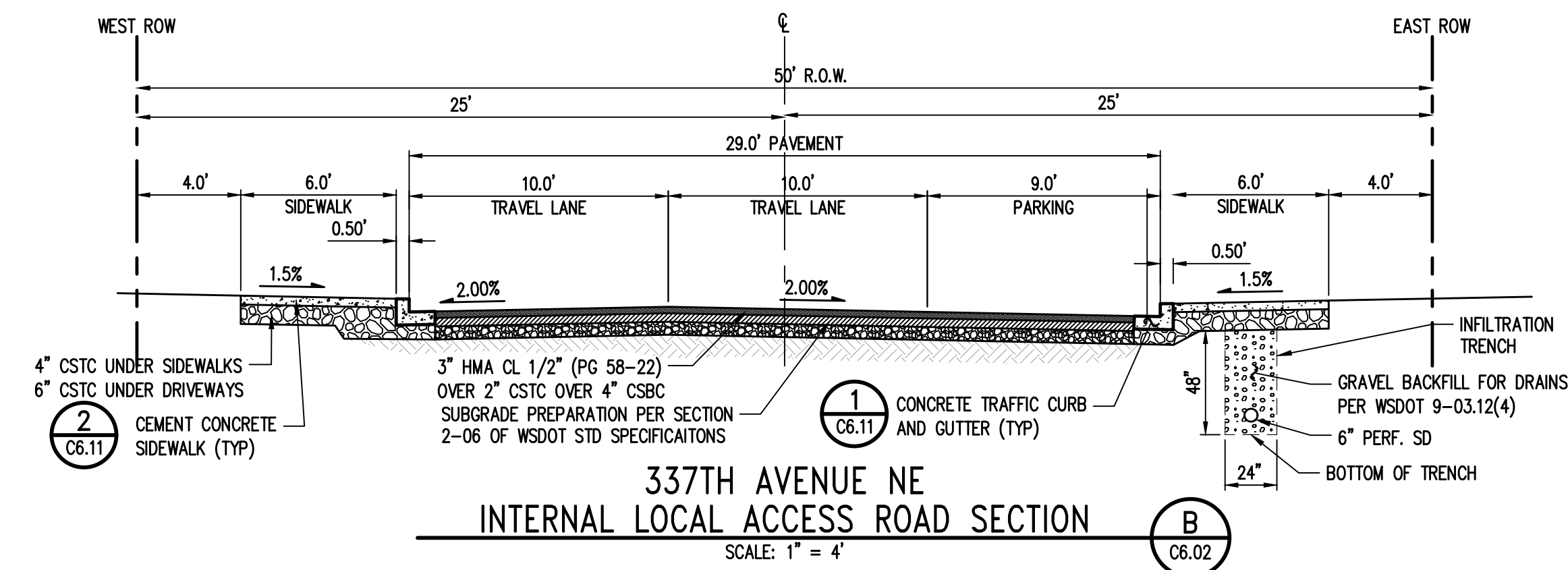
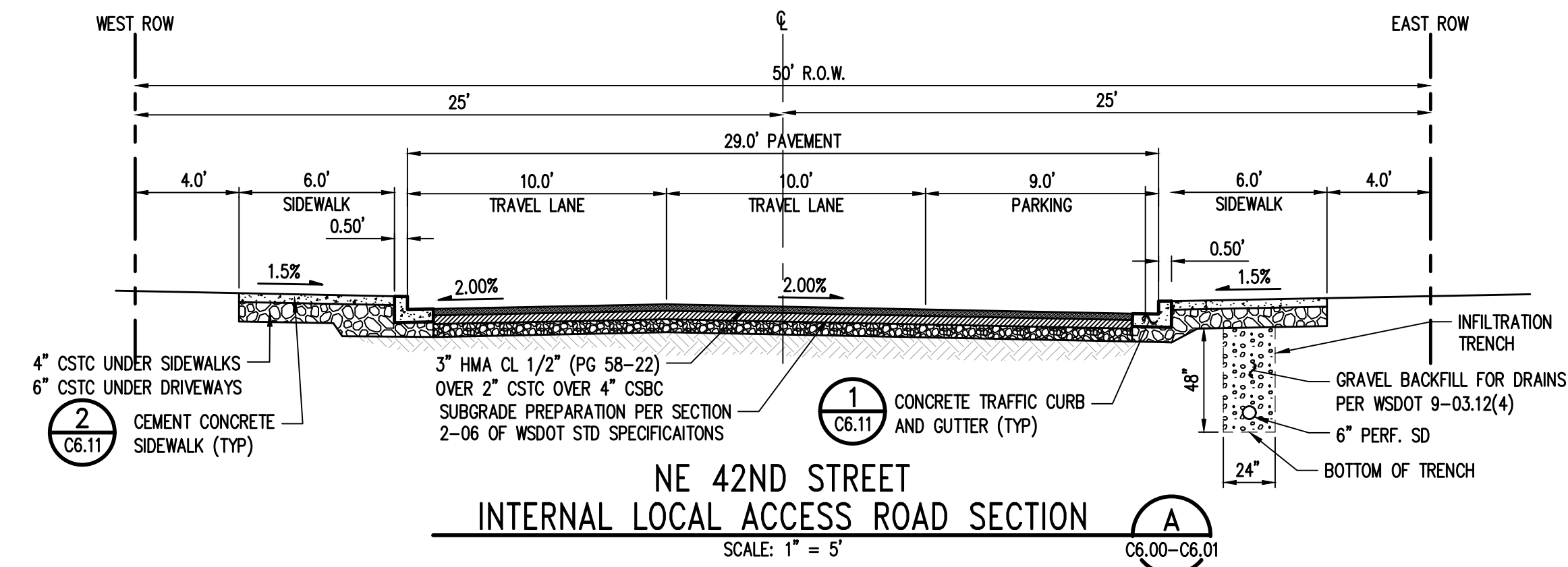
CALL TWO BUSINESS DAYS BEFORE YOU DIG 1-800-424-5555
SCALE: AS NOTED



TOLT PLACE
CARNATION, WASHINGTON
336TH AVENUE NE GRADING & DRAINAGE PLAN AND PROFILE

SHEET
C6.03

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.



Z:\2000001-2009999\2000639 Tolt Place\CAD\Design\CD-CITY\CD C6.10 GD DTL.dwg

Jun 06, 2023 - 9:21am RossC

NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

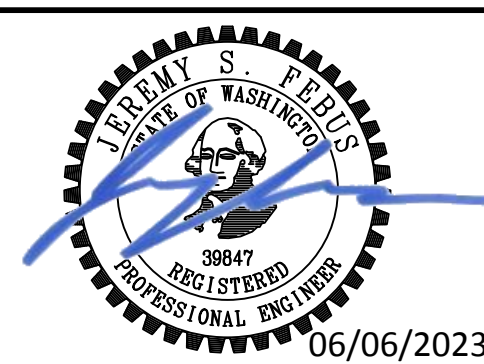
DRAWN BY TAD	DESIGNED BY WTJ
CHECKED BY WTJ	APPROVED BY JSF
DATE 12/22/2022	
J O B No. :2000639	

**CALL TWO BUSINESS
DAYS BEFORE YOU DIG
1-800-424-5555**

SCALE:
AS NOTED



1601 5th Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
www.kpff.com



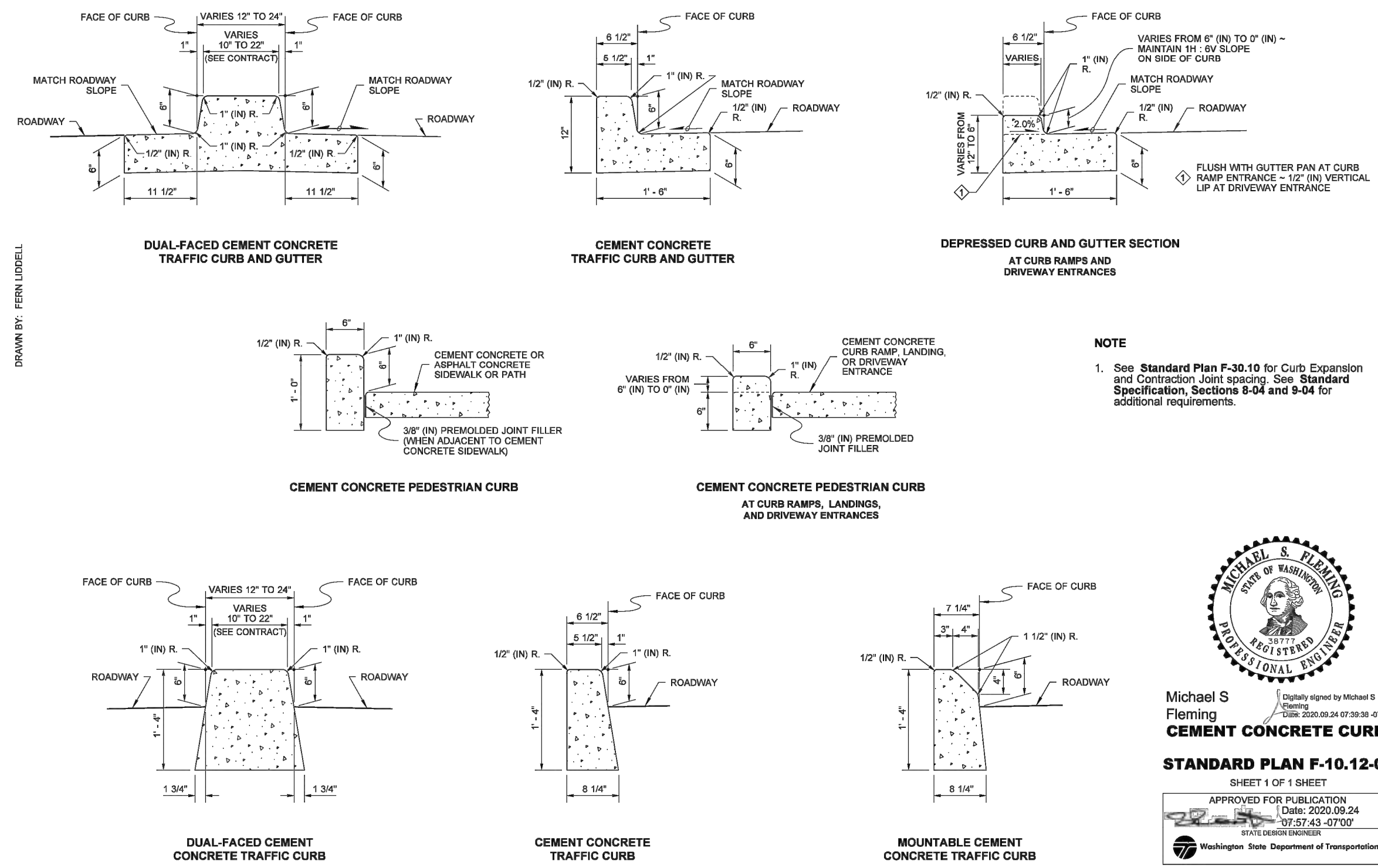
TOLT PLACE
CARNATION, WASHINGTON

ROAD SECTIONS

SHEET

C6.10

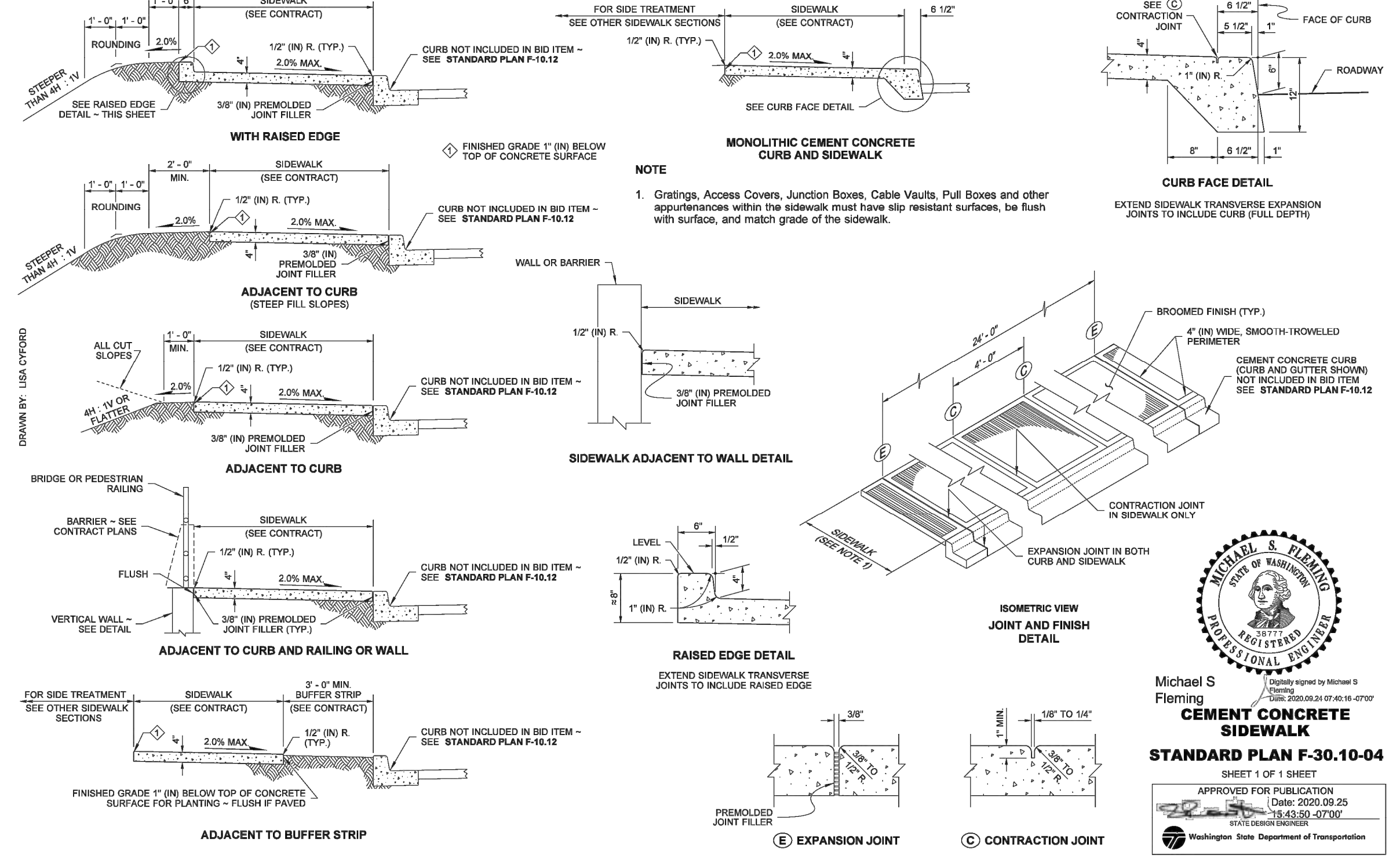
SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.



CEMENT CONCRETE CURBS

WSDOT STD PLAN F-10.12-04

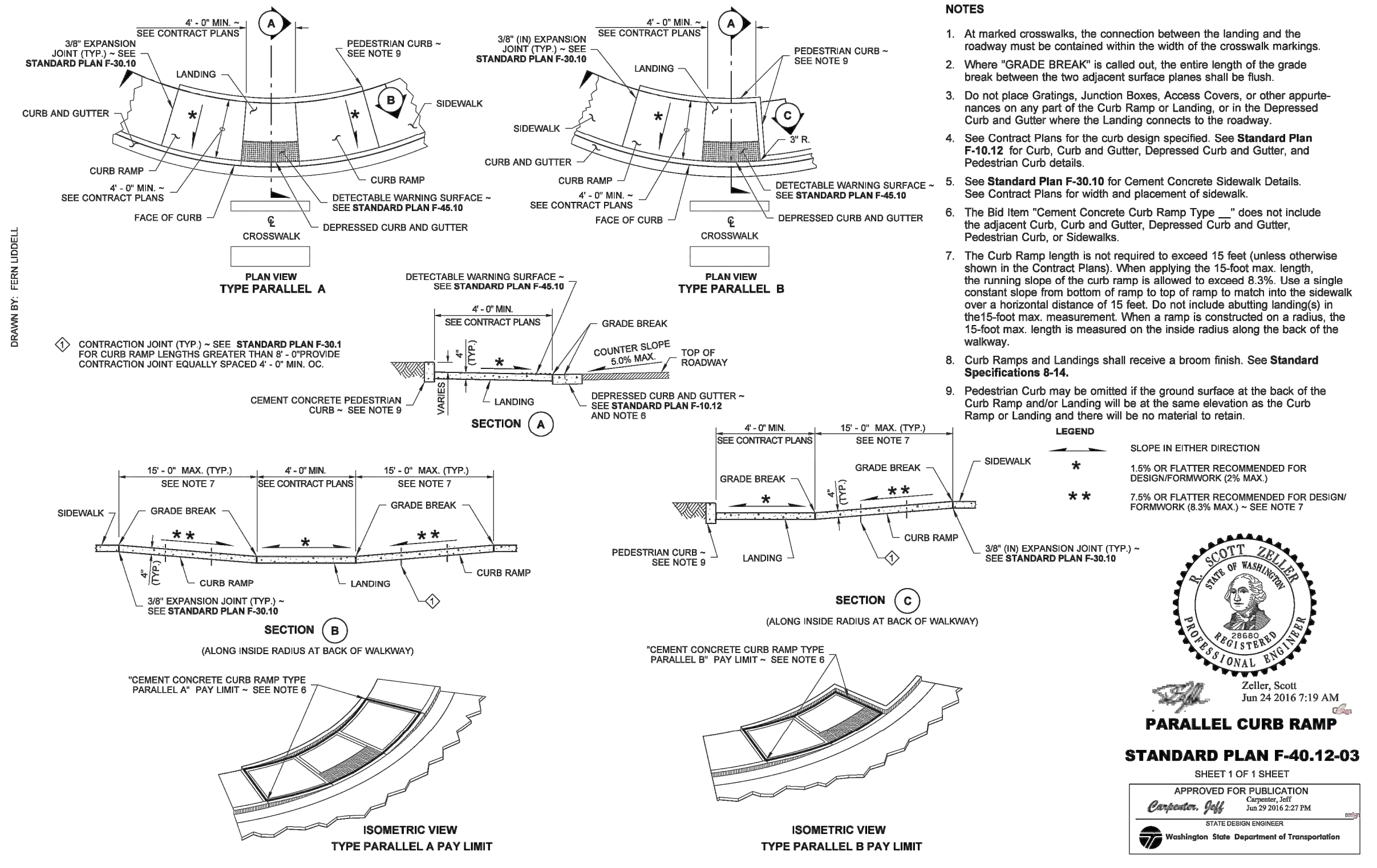
1
C6.10



CEMENT CONCRETE SIDEWALK

WSDOT STD PLAN F-30.10-04

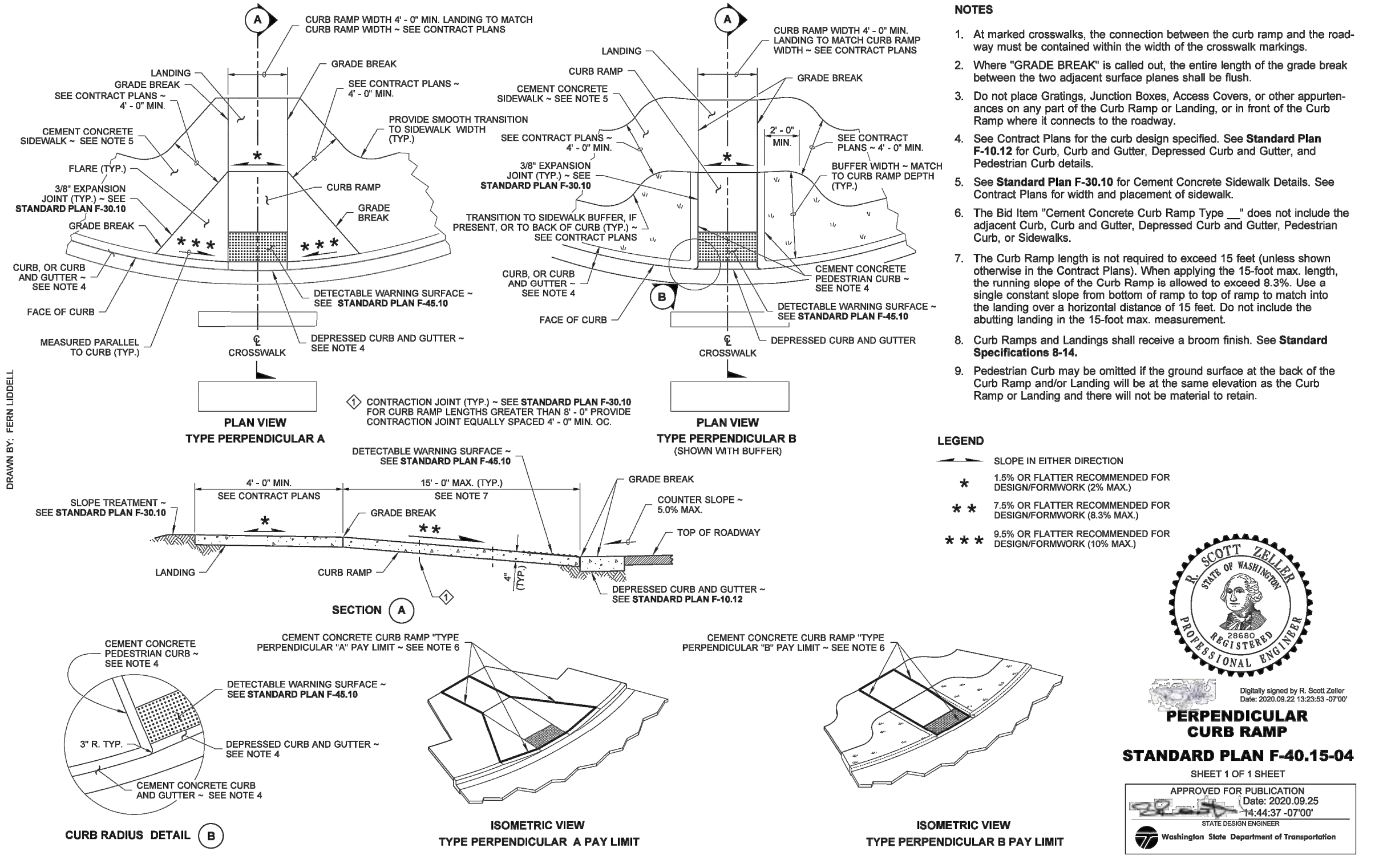
2
C6.10



PARALLEL CURB RAMP

WSDOT STD PLAN F-40.12-03

3
C6.03



PERPENDICULAR CURB RAMP

WSDOT STD PLAN F-40.14-04

4
C6.00

DRAWN BY: FERN LIDDELL
 Z:\2000001-2009999\2000639 Toll Place\CAD\Design\CD-CITY\CD_C6.10_DTL.dwg
 Jun 06, 2023 - 9:21am
 RossC

NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

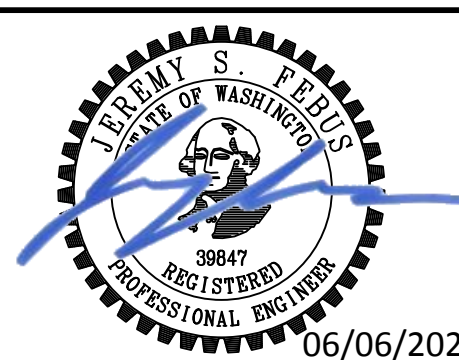
DRAWN BY	DESIGNED BY
TAD	WTJ
CHECKED BY	APPROVED BY
WTJ	JSF
DATE	
12/22/2022	
J O B No. :2000639	

CALL TWO BUSINESS DAYS BEFORE YOU DIG 1-800-424-5555

SCALE: AS NOTED



1601 5th Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
www.kpff.com



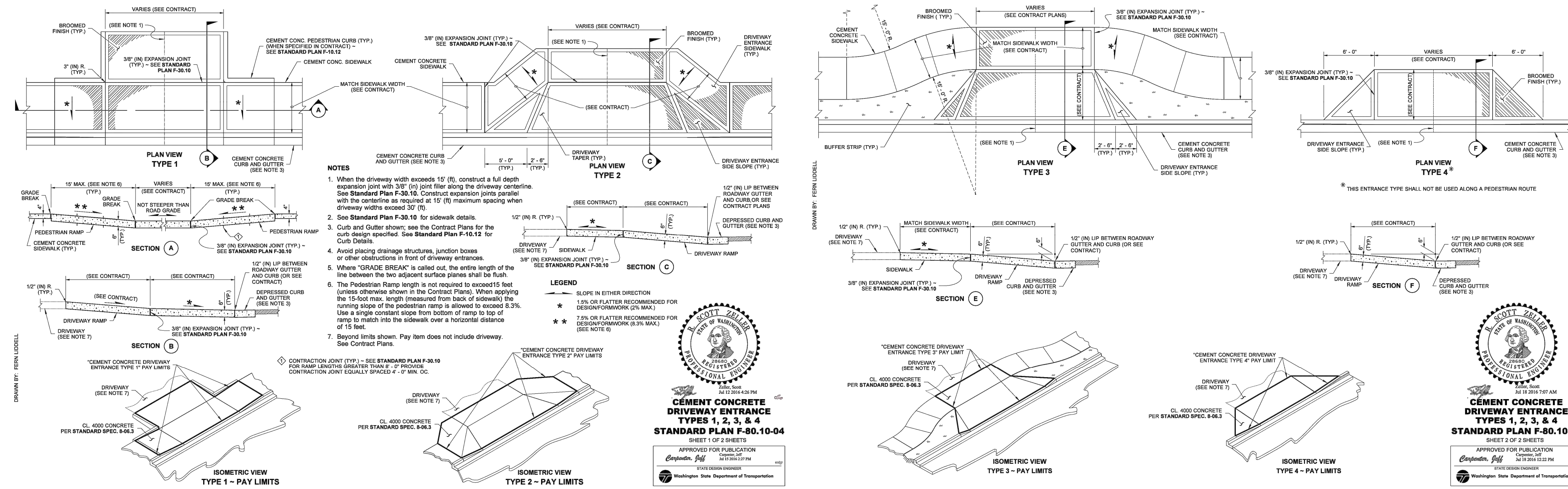
06/06/2023

TOLT PLACE
CARNATION, WASHINGTON

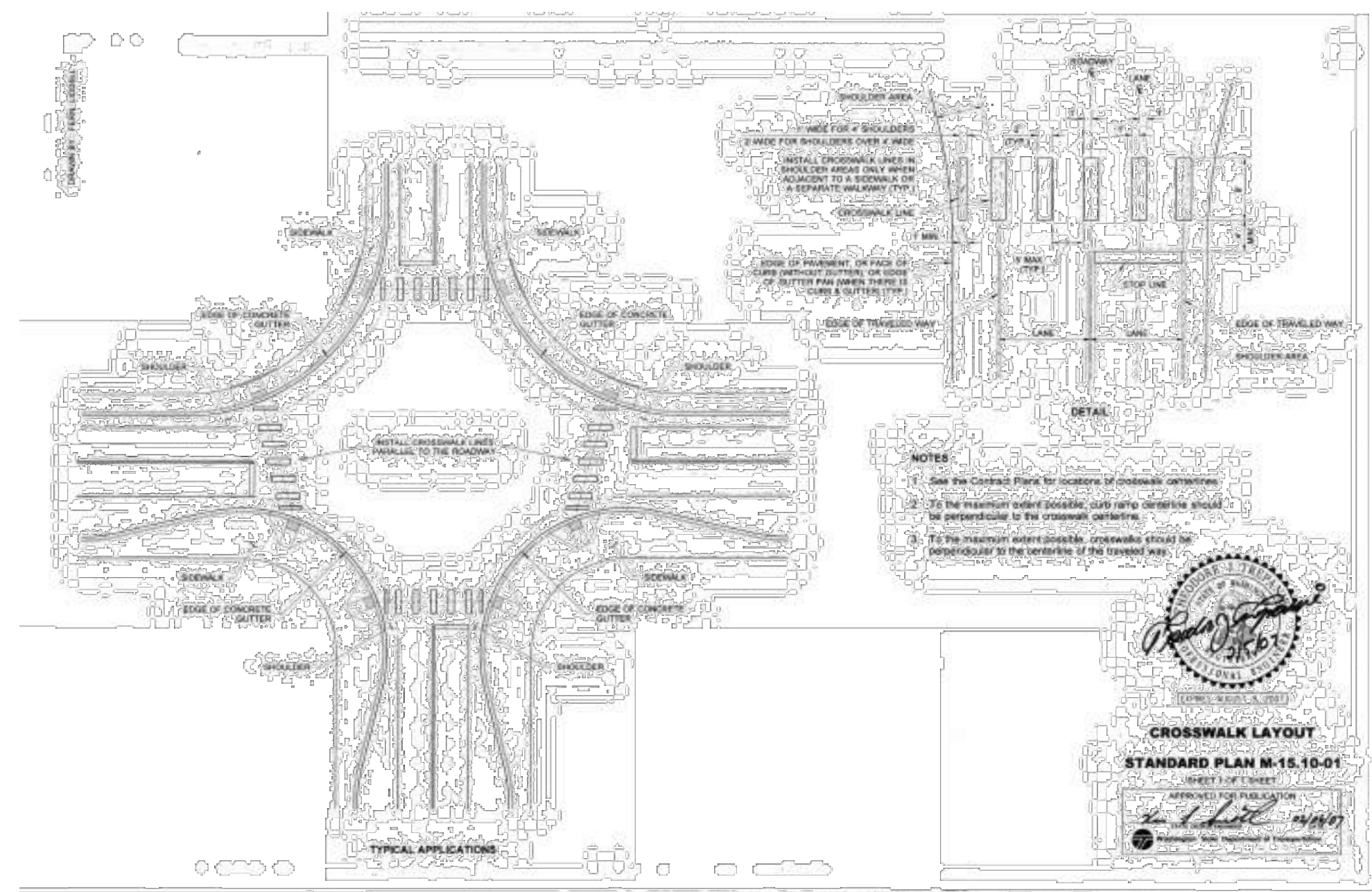
ROADWAY DETAILS

SHEET
C6.11

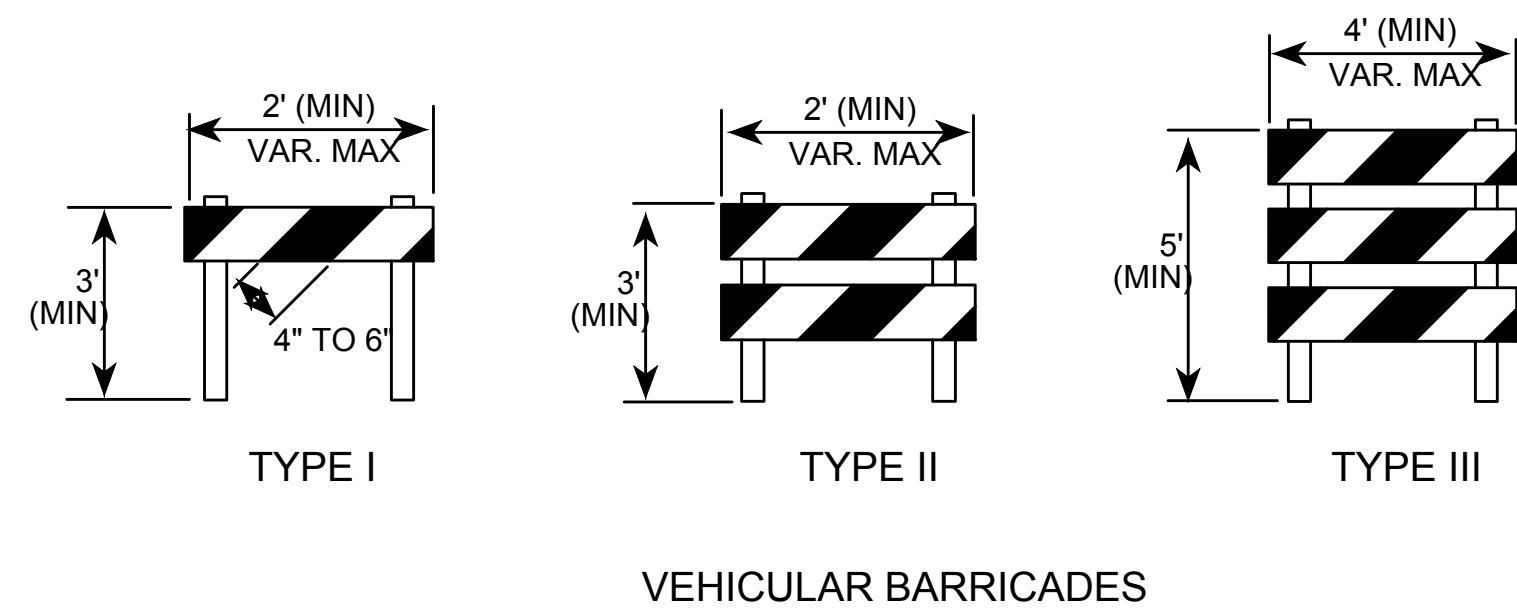
SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.



CEMENT CONCRETE DRIVEWAY ENTRANCE TYPES 1-4 (5)
WSDOT SDT PLAN F-80.10-04 C6.00-C6.03



CROSSWALK LAYOUT (6)
WSDOT SDT PLAN M-15.10-01 C6.00-C6.03



STREET END BARRICADE (7)
WSDOT SDT PLAN M-15.10-01 C6.01-C6.02

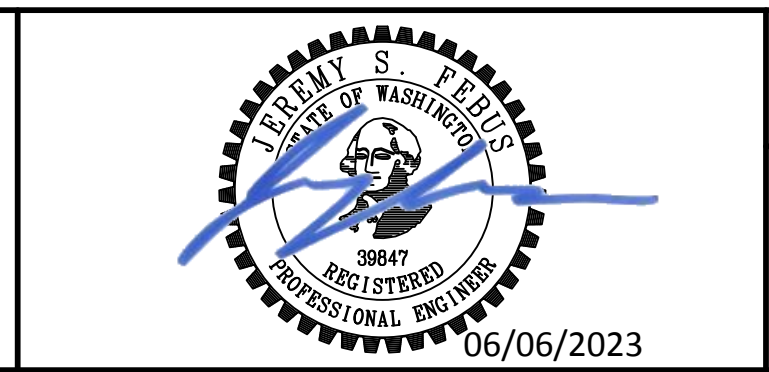
Z:\2000001-2009999\2000639 Toll Place\CAD\Design\CD-CITY\CD_C6.10_GD_DTL.dwg Jun 06, 2023 - 9:21am RossC

NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD	DESIGNED BY WTJ
CHECKED BY WTJ	APPROVED BY JSF
DATE 12/22/2022	
JOB No. : 2000639	

CALL TWO BUSINESS DAYS BEFORE YOU DIG 1-800-424-5555

SCALE: AS NOTED

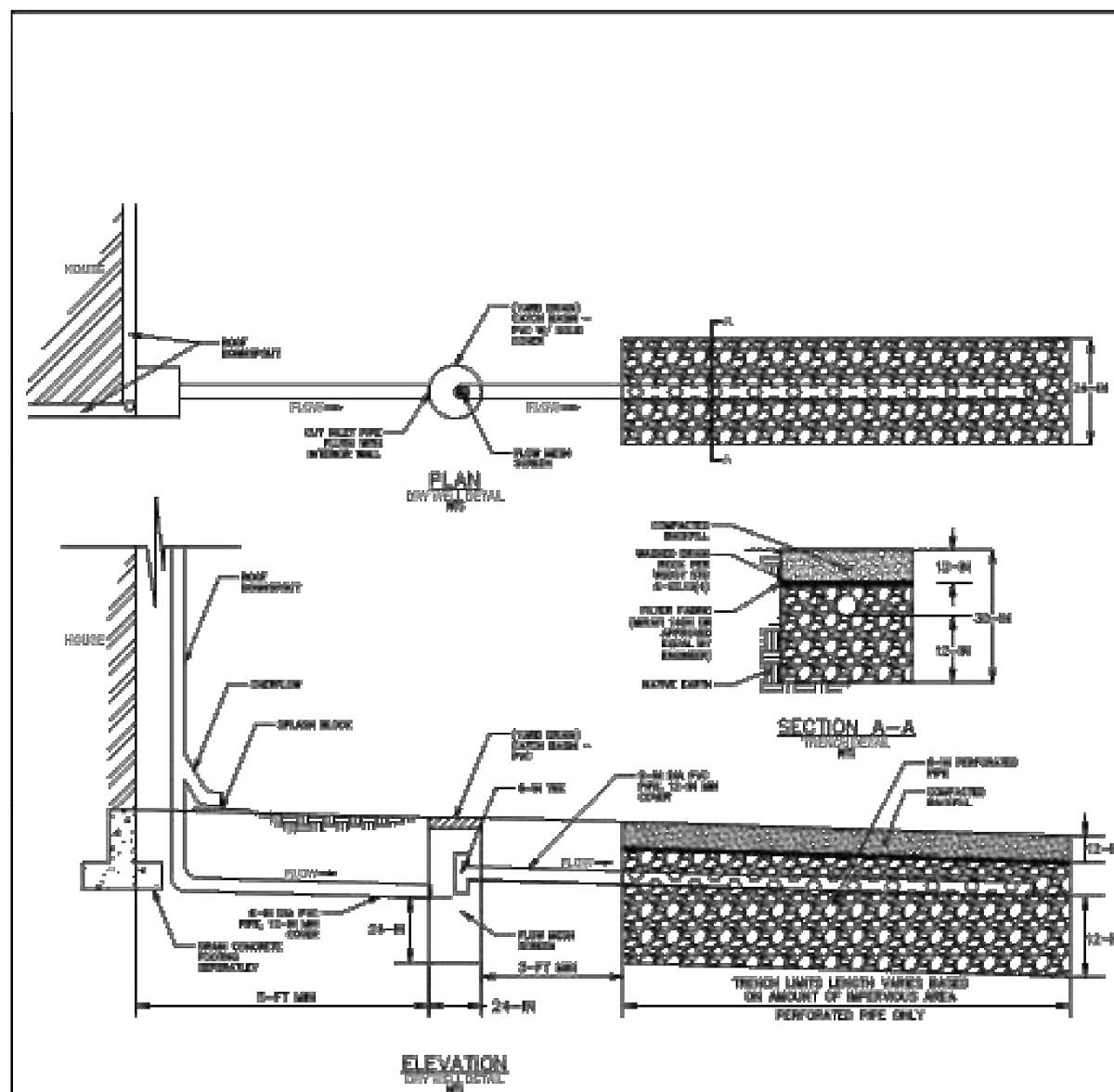


TOLT PLACE
CARNATION, WASHINGTON

ROADWAY DETAILS

SHEET
C6.12

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.



- NOTES:
- 1) GUY WELL LOCATION SHALL BE 10-FT MIN FROM HOUSE FOOTING AND PROPERTY LINE.
 - 2) 24"-IN (YARD DRAIN) CATCH BASIN PER WSDOT STD B-10.70-01 AND SHALL HAVE A 24"-IN SLUMP DEPTH.
 - 3) RINSED DRAIN ROCK PER WSDOT STD SPECS SECTION 9-03.12(4).
 - 4) 6"-IN PIPE SHALL TRANSITION FROM SOLID PVC TO PERFORATED ONCE WITHIN TRENCH LIMITS.
 - 5) MAXIMUM TRENCH LENGTH IS 100-FT FROM CATCH BASIN.

INFILTRATION TRENCH NOTES:

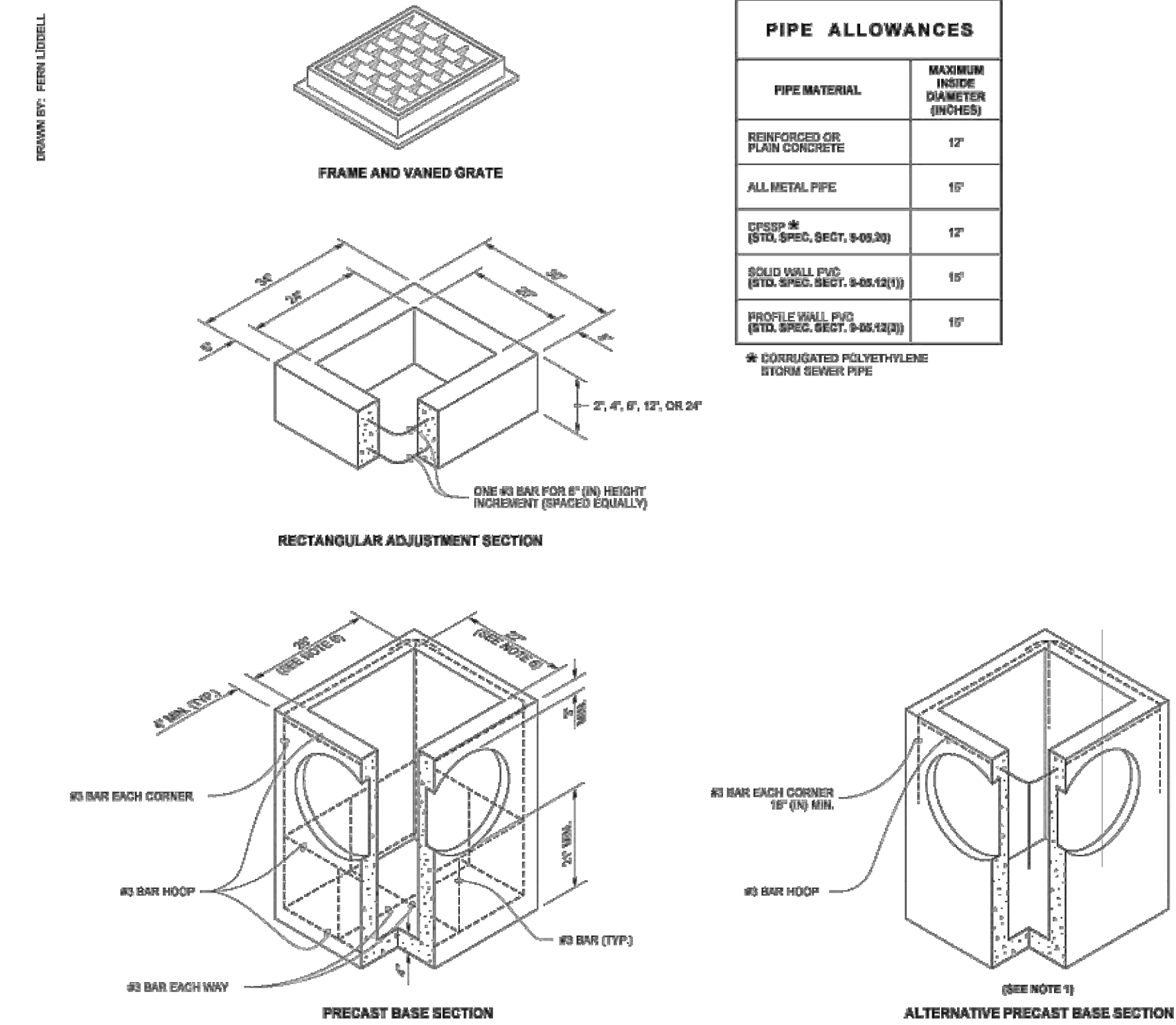
1. TRENCH SIZE AND LOCATIONS SHOWN IN THESE PLANS ARE PRELIMINARY. FINAL SIZE AND LOCATION WILL BE DETERMINED AT THE TIME OF BUILDING PERMIT. TRENCHES SHALL BE CONSTRUCTED WITH BUILDING CONSTRUCTION.
2. TRENCHES SHALL BE INSTALLED PER CITY OF CARNATION STANDARD DETAIL DR-3 EXCEPT THAT TRENCH BOTTOM SHALL BE 4.5- FEET BELOW FINISHED GRADE AND MINIMUM TRENCH LENGTH PER TABLE BELOW AND BASED ON IMPERVIOUS LOT COVERAGE TO THE TRENCH.
3. IF FOOTING DRAINS ARE CONNECTED TO THE TRENCH, THE DEPTH OF GRAVEL SHALL BE MEASURED FROM THE FOOTING DRAIN ELEVATION.

MINIMUM TRENCH LENGTH BASED ON IMPERVIOUS AREA	
MAX IMPERVIOUS (SQUARE FEET)	MIN. TRENCH LENGTH (FEET)
2500	22
3000	26
3500	30
4000	35
4500	39
5000	43
5500	48

LOHNER (425)-454-3150

DOWNSPOUT INFILTRATION TRENCH

11/2018 DWG. NO. DR-3



PIPE ALLOWANCES	
PIPE MATERIAL	MAXIMUM INSIDE DIAMETER (INCHES)
REINFORCED OR PLAIN CONCRETE	12"
ALL METAL PIPE	16"
CPSPS # (STD. SPEC. SECT. 9-05.20)	12"
SOLID WALL PVC (STD. SPEC. SECT. 9-05.12(1))	16"
PROFILE WALL PVC (STD. SPEC. SECT. 9-05.12(2))	16"

* CORRUGATED POLYETHYLENE STORM SEWER PIPE

- NOTES**
1. As acceptable alternatives to the rebar shown in the PRECAST BASE SECTION, fibers (placed according to the Standard Specifications), or wire mesh having a minimum area of 0.12 square inches per foot shall be used with the minimum required rebar shown in the ALTERNATIVE PRECAST BASE SECTION. Wire mesh shall not be placed in the knockouts.
 2. The knockout diameter shall not be greater than 20" (in). Knockouts shall have a wall thickness of 2" (in) minimum to 2.5" (in) maximum. Provide a 1.5" (in) minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with Standard Specification Section 9-04.3.
 3. The maximum depth from the finished grade to the lowest pipe invert shall be 5' (ft).
 4. The frame and grate may be installed with the flange down, or integrally cast into the adjustment section with flange up.
 5. The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1 : 24 or steeper.
 6. The opening shall be measured at the top of the Precast Base Section.
 7. All pickup holes shall be grouted full after the basin has been placed.

WSDOT STANDARD PLAN B-5.20-03

CATCH BASIN TYPE 1

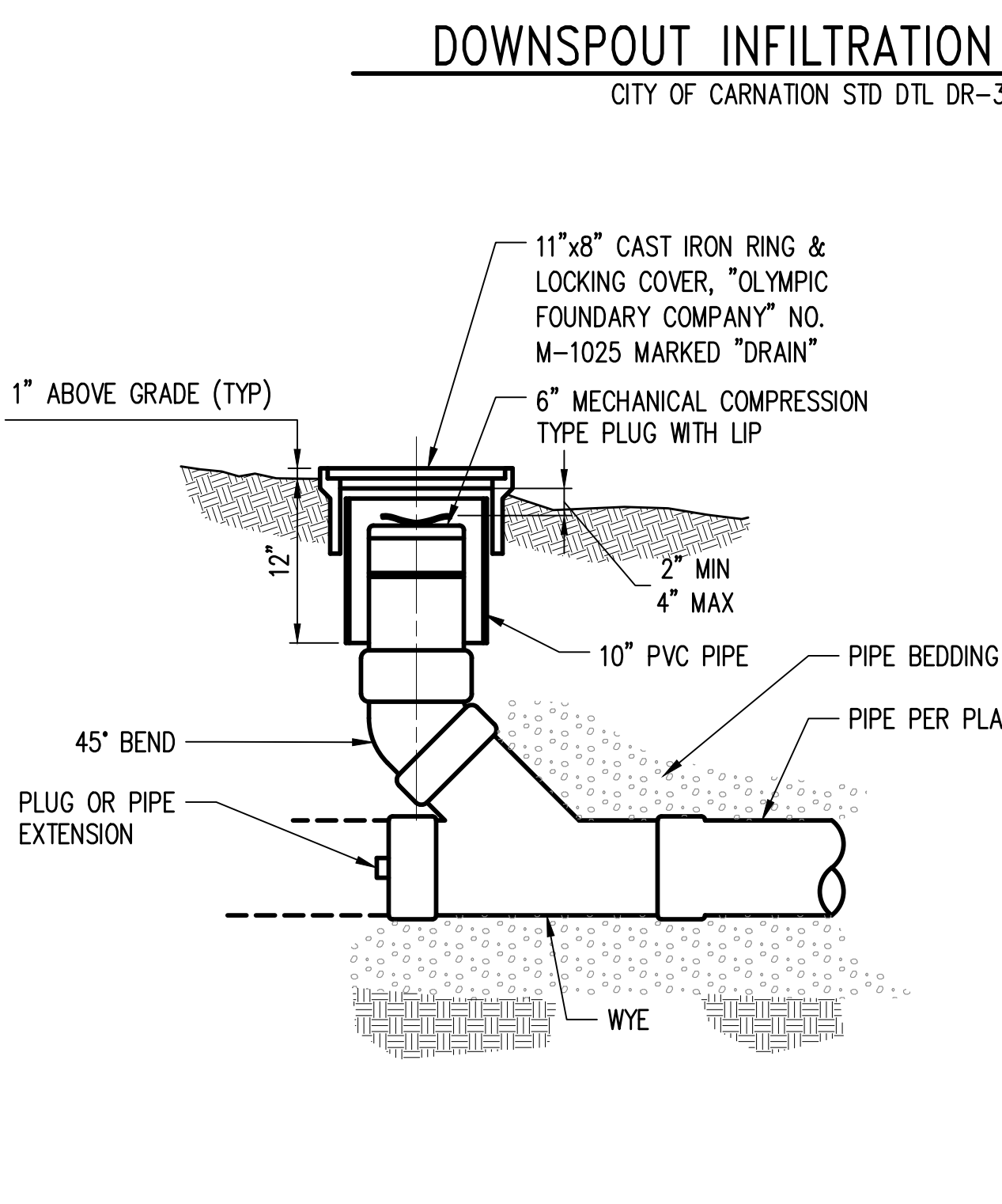
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

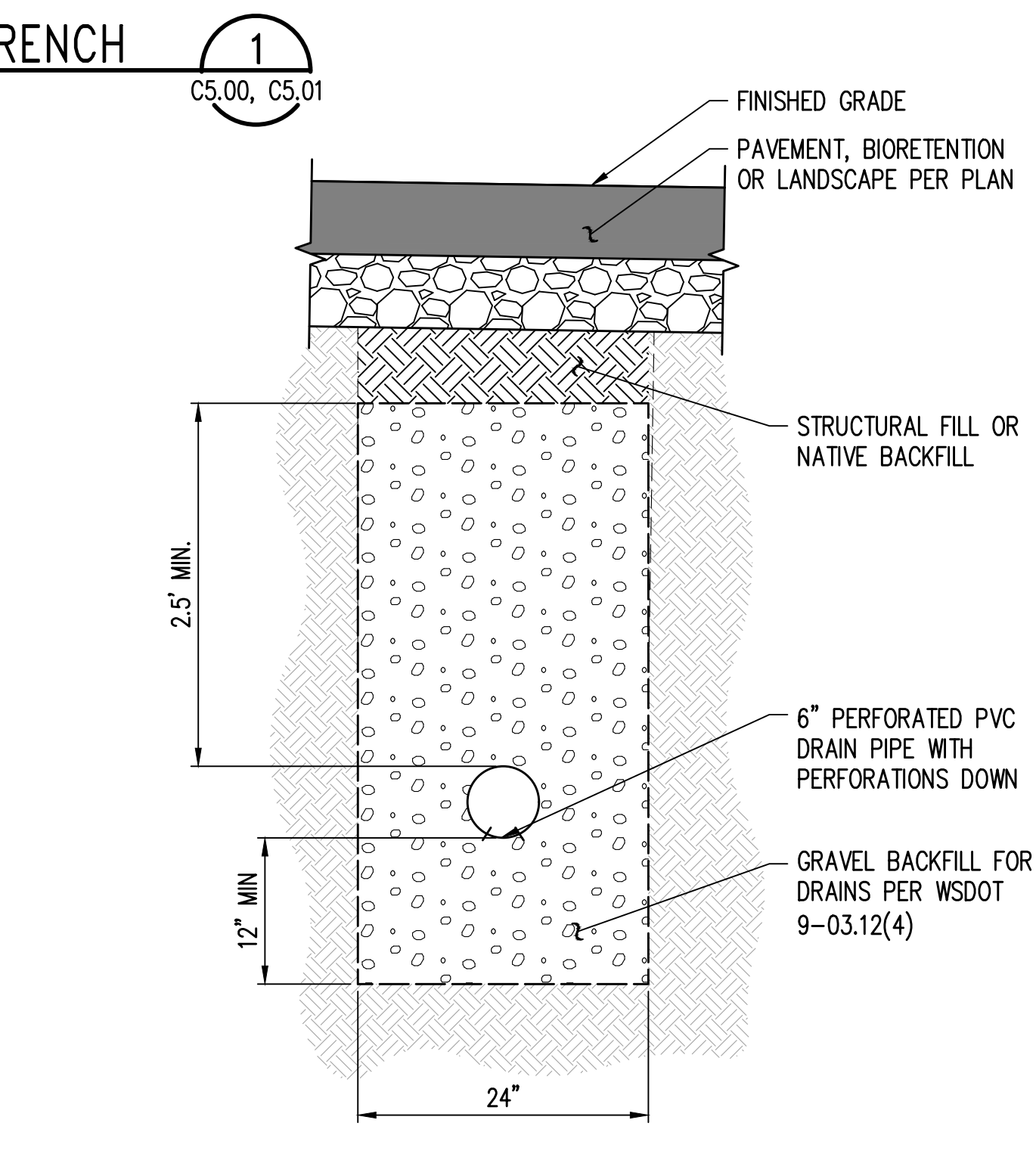
Roark, Steve

Washington State Department of Transportation

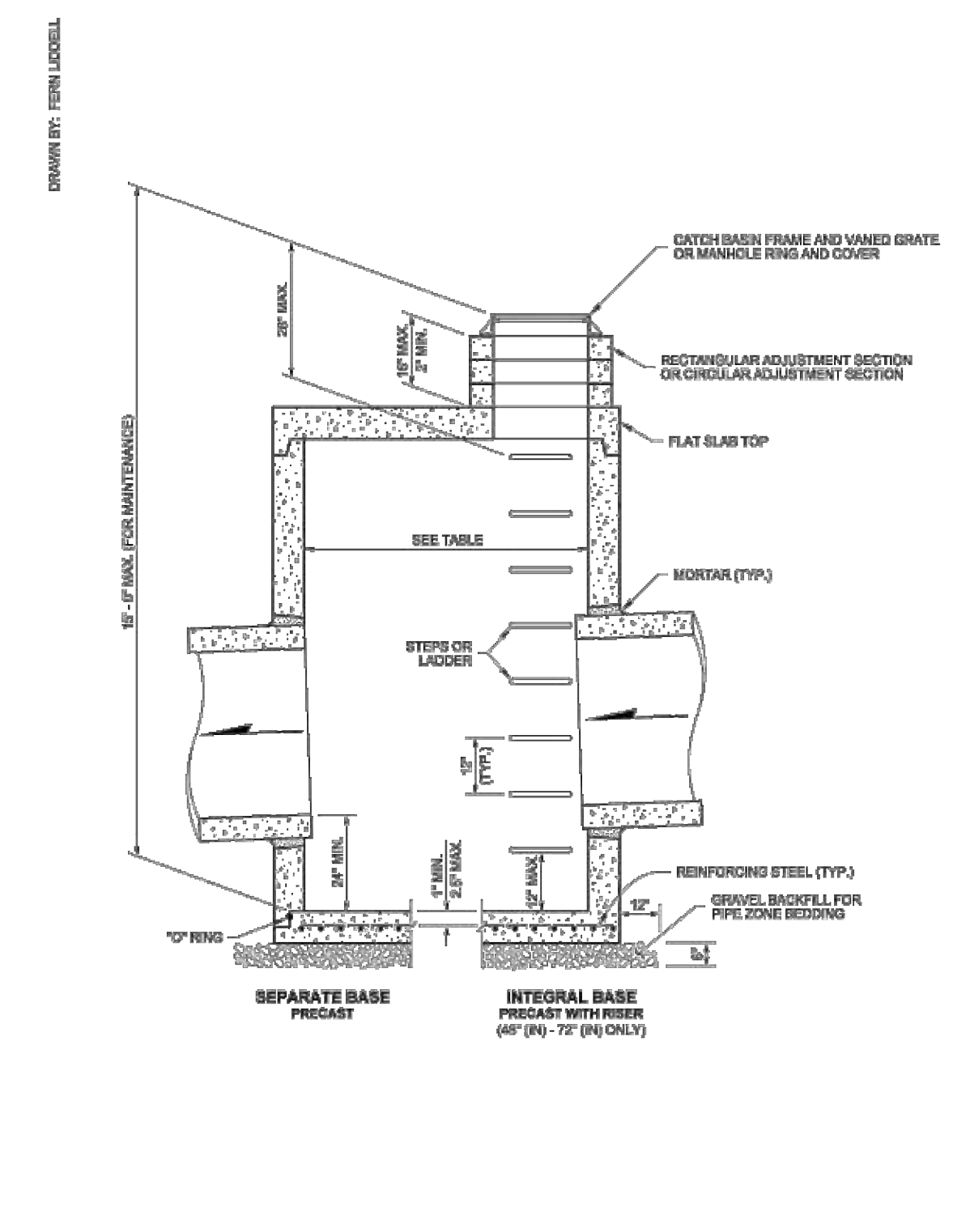
CATCH BASIN TYPE 1
WSDOT STANDARD PLAN B-5.20-03



STORM DRAIN CLEANOUT (SDCO)
NTS



INFILTRATION TRENCH
NTS



CATCH BASIN DIMENSIONS				
CATCH BASIN DIAMETER	MIN. WALL THICKNESS	MIN. BASE THICKNESS	MAXIMUM KNOCKOUT SIZE	MINIMUM DISTANCE BETWEEN KNOCKOUTS
48"	4"	6"	36"	8"
54"	4.5"	6"	42"	8"
60"	5"	6"	48"	8"
72"	6"	6"	60"	12"
84"	6"	12"	72"	12"
96"	6"	12"	84"	12"
120"	10"	12"	96"	12"
144"	12"	12"	108"	12"

CATCH BASIN DIAMETER	PIPE ALLOWANCES				
	PIPE MATERIAL WITH MAXIMUM INSIDE DIAMETER	ALL CONCRETE	ALL METAL	CPSPS # (1)	SOLID WALL PVC (2)
48"	24"	30"	24"	30"	30"
54"	30"	36"	30"	36"	36"
60"	36"	42"	36"	42"	42"
72"	42"	54"	42"	48"	48"
84"	54"	60"	54"	48"	48"
96"	60"	72"	60"	48"	48"
120"	66"	84"	60"	48"	48"
144"	78"	96"	60"	48"	48"

- ① Corrugated Polyethylene Storm Sewer Pipe (See Standard Specification Section 9-05.20)
- ② (See Standard Specification Section 9-05.12(1))
- ③ (See Standard Specification Section 9-05.12(2))
- ④ Polypropylene Pipe (See Standard Specification Section 9-05.24)

WSDOT STANDARD PLAN B-10.20-02

CATCH BASIN TYPE 2

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Washington State Department of Transportation

CATCH BASIN TYPE 2
WSDOT STANDARD PLAN B-10.20-02

Z:\20000001-2009999\200639 Toll Place\CAD\Design\CD-CITY\CD C6.10 GD DTL.S.dwg

NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD
DESIGNED BY WTJ
CHECKED BY WTJ
APPROVED BY JSF
DATE 12/22/2022
J O B No. :2000639

CALL TWO BUSINESS DAYS BEFORE YOU DIG 1-800-424-5555

SCALE: AS NOTED

kpff

1601 5th Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
www.kpff.com

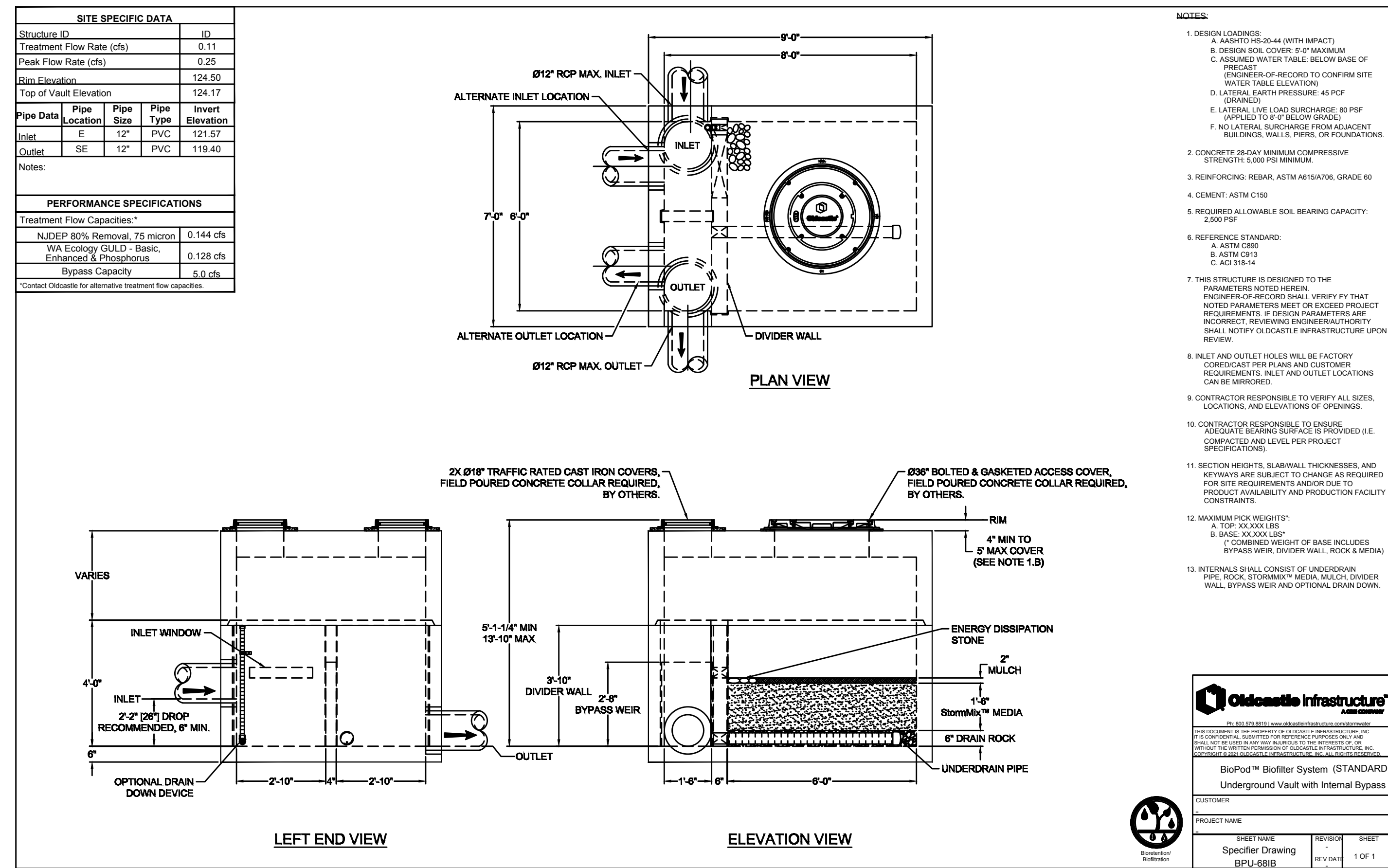
W. J. PERKINS & ASSOCIATES
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
39847

TOLT PLACE
CARNATION, WASHINGTON

GRADING AND DRAINAGE DETAILS

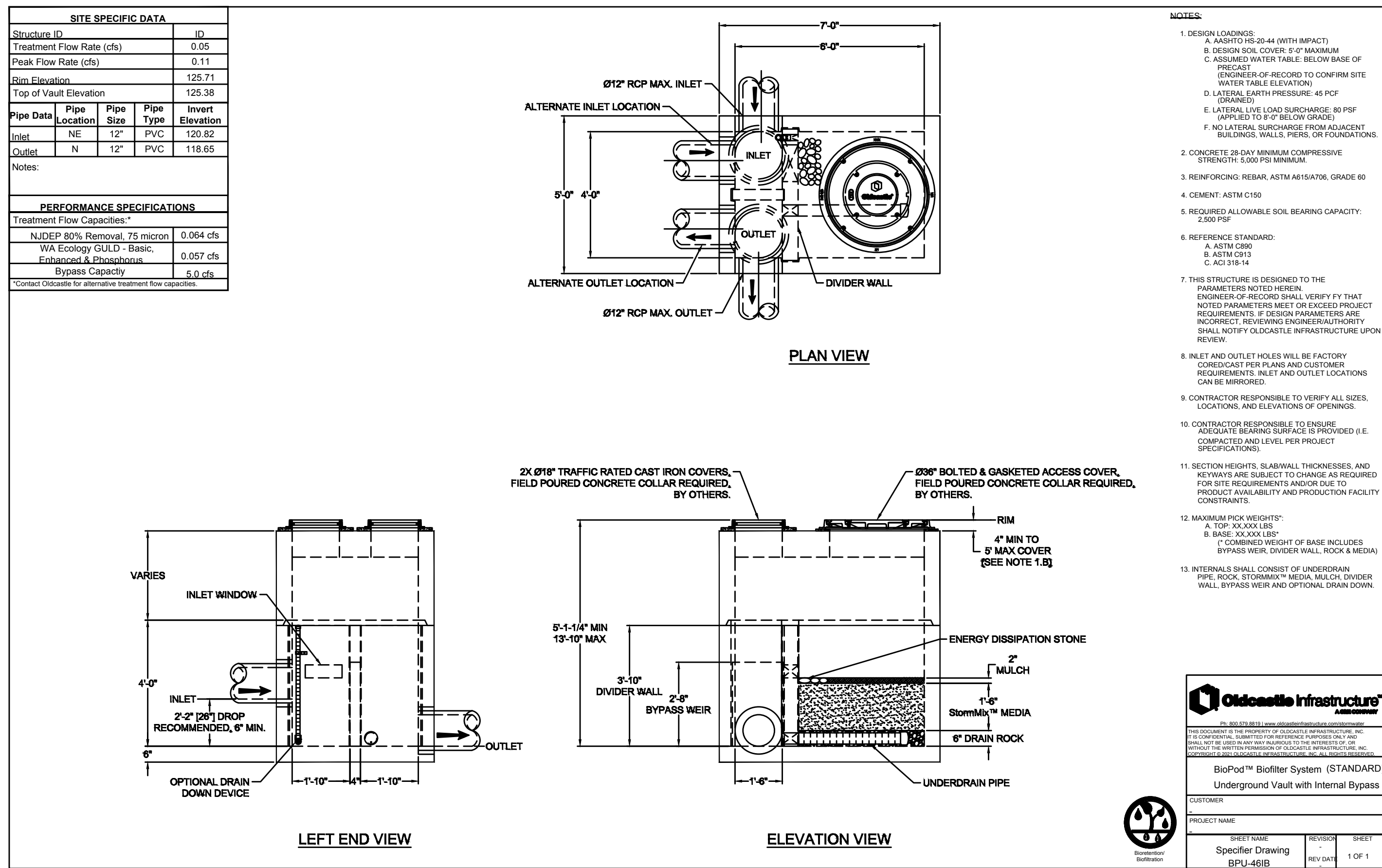
SHEET C6.13

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.



WATER QUALITY VAULT #1
NTS

6
C6.00



WATER QUALITY VAULT #2
NTS

7
C6.03

Z:\20000001-2009999\2000639 Toll Place CAD\Design\CD-CITY\CD_C6_10_BD_DTL.dwg Jun 06, 2023 - 9:21am RossC

NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD
DESIGNED BY WTJ
CHECKED BY WTJ
APPROVED BY JSF
DATE 12/22/2022
J O B No. :2000639

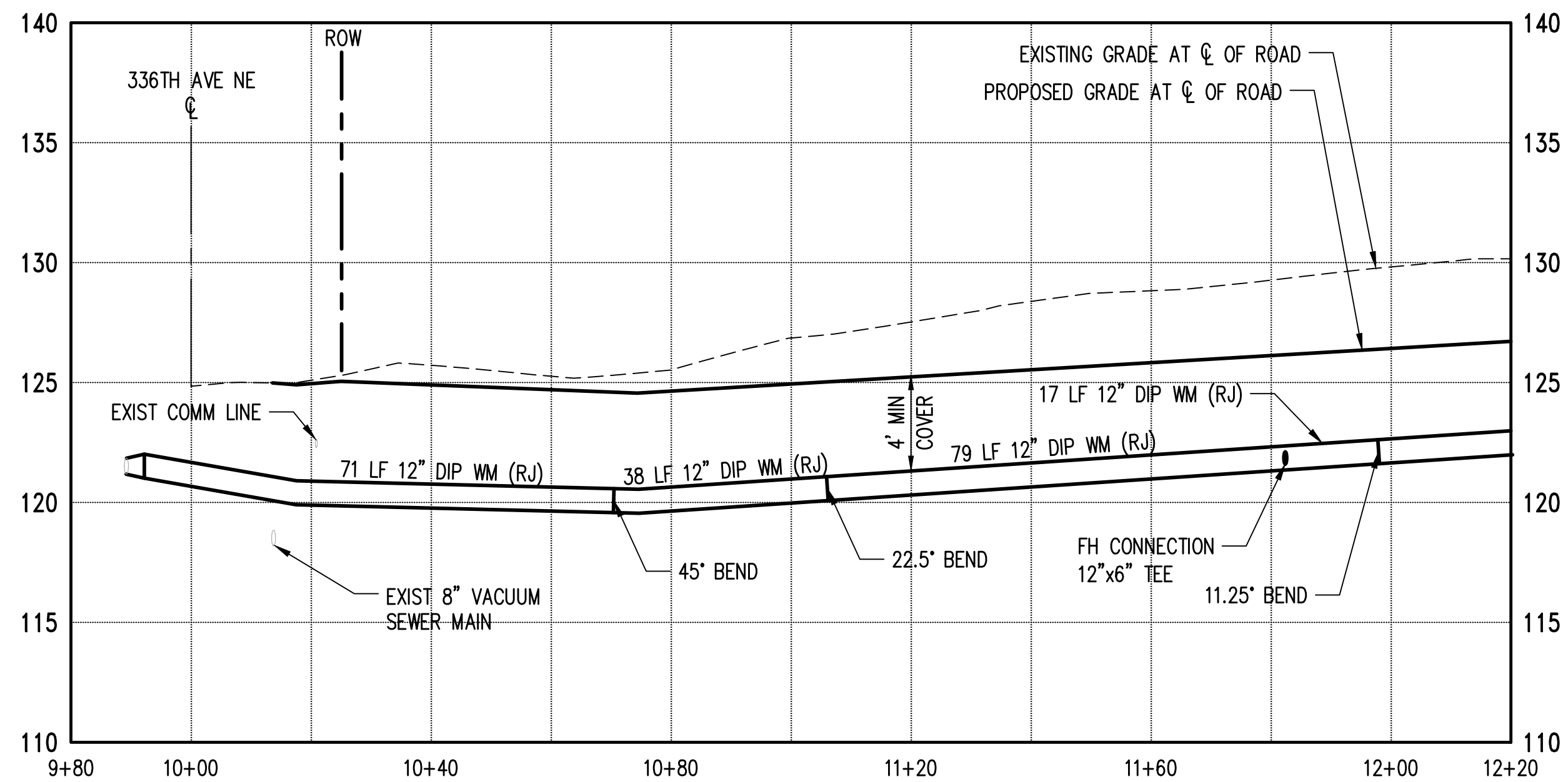
CALL TWO BUSINESS DAYS BEFORE YOU DIG 1-800-424-5555
SCALE: AS NOTED



TOLT PLACE
CARNATION, WASHINGTON
WATER QUALITY DETAILS

SHEET
C6.14

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.

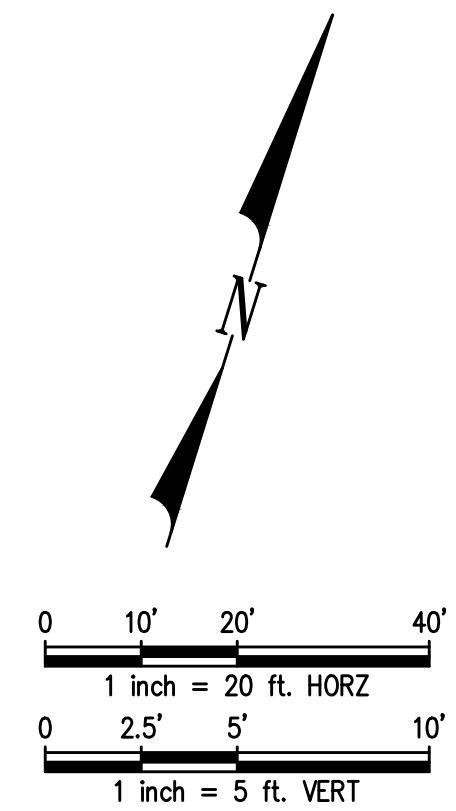
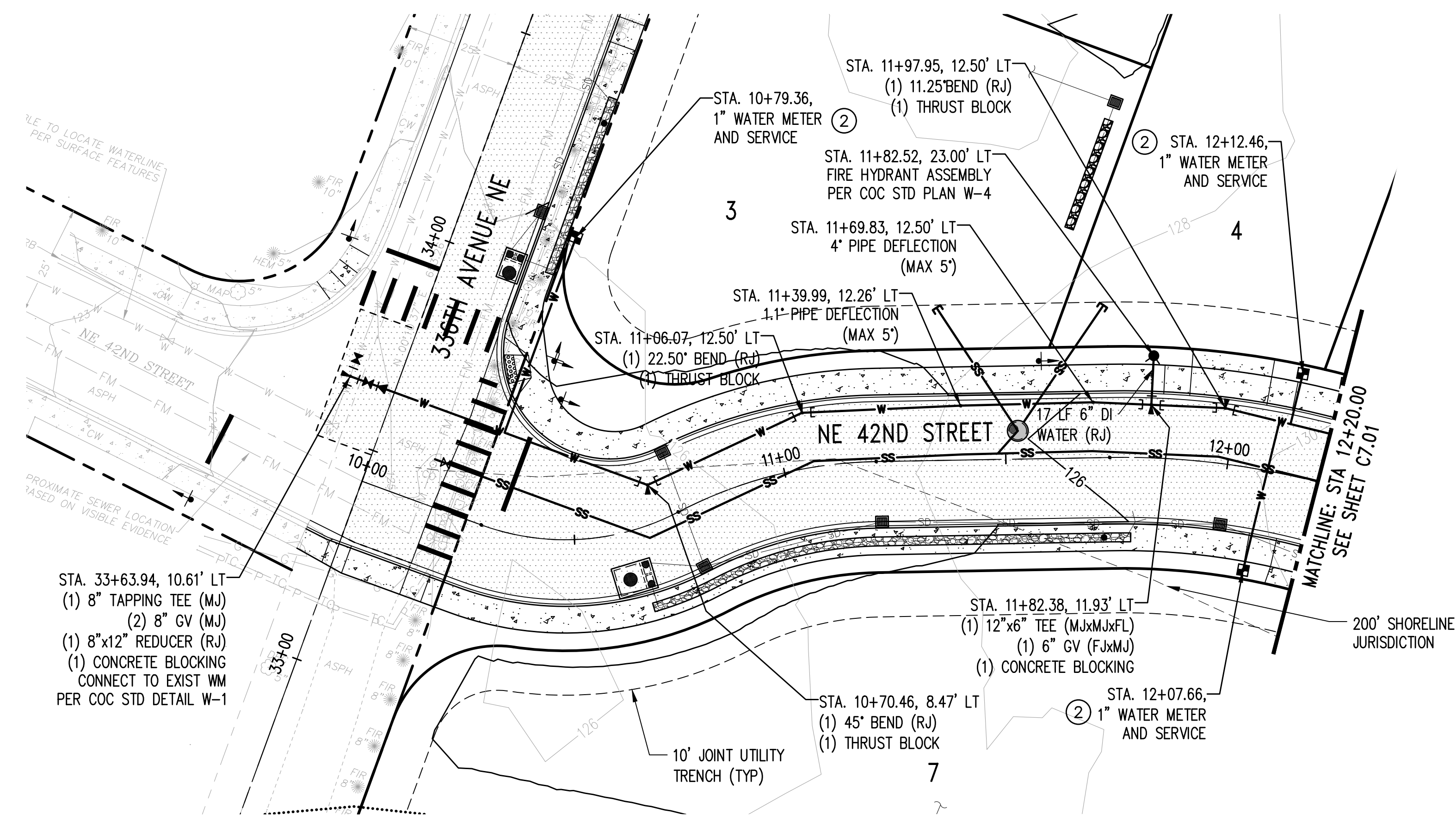


WATER NOTES:

1. ALL NEW WATER MAINS SHALL BE DUCTILE IRON PIPE AND SHALL CONFORM TO SECTION 7 OF THE CITY OF CARNATION (COC) COMBINED WATER AND SANITARY SEWER UTILITY TECHNICAL STANDARDS (CWSSUTS).
2. ALL WATER SERVICES SHALL BE 1-INCH SERVICE LINE TO A 5/8-INCH METER AND CONNECTION PER COC CWSSUTS WATER STANDARD DETAIL W-15, W-16 AND W-17
3. CITY INSPECTOR SHALL BE ON-SITE TO OBSERVE CONNECTIONS TO EXISTING WATER MAINS. CONTRACTOR SHALL COORDINATE WITH CITY INSPECTOR PRIOR TO CONNECTING TO EXISTING WATER MAIN.
4. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH COC CWSSUTS.
5. WATER MAINS LARGER THAN 8-INCHES SHALL HAVE A MINIMUM COVER OF 4- FEET.
6. INSTALL 2-INCH BLOW OFF ASSEMBLY PER COC WATER STANDARD DETAIL W-7.
7. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES.

LEGEND

- WATER MAIN
- WATER METER
- FIRE HYDRANT
- SANITARY SEWER MAIN (SS)
- SIDE SEWER STUB
- VALVE PIT
- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE/ROW LINE
- CENTERLINE
- BUILDING SET BACK LINE
- EASEMENT LINE
- WETLAND BUFFER LINE
- CHANNEL MIGRATION ZONE (CMZ)
- OHWM (TRIBUTARY SIDE CHANNEL)
- SHORELINE JURISDICTION
- SHORELINE BUFFER
- FEMA FLOODWAY (100 YR FLOOD PLAIN)



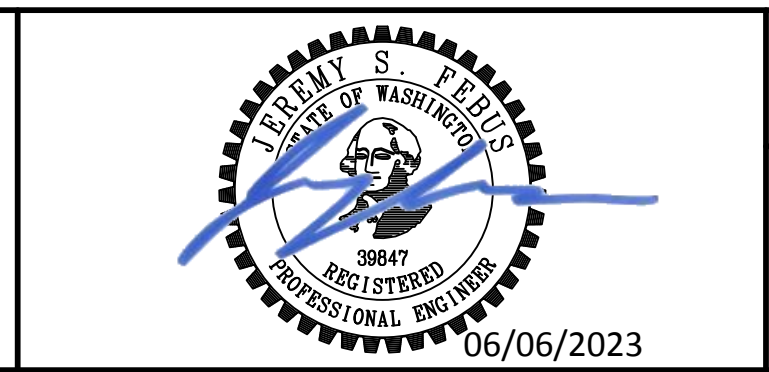
Z:\2000001-2009999\2000639_Tolt Place\CAD\Design\CD-C7\CD_C7.00_WTR_PP.dwg

Jun 06, 2023 - 9:21am RossC

NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD
 DESIGNED BY WTJ
 CHECKED BY WTJ
 APPROVED BY JSF
 DATE 12/22/2022
 J O B No. :2000639

CALL TWO BUSINESS DAYS BEFORE YOU DIG 1-800-424-5555
 SCALE: AS NOTED



TOLT PLACE
 CARNATION, WASHINGTON

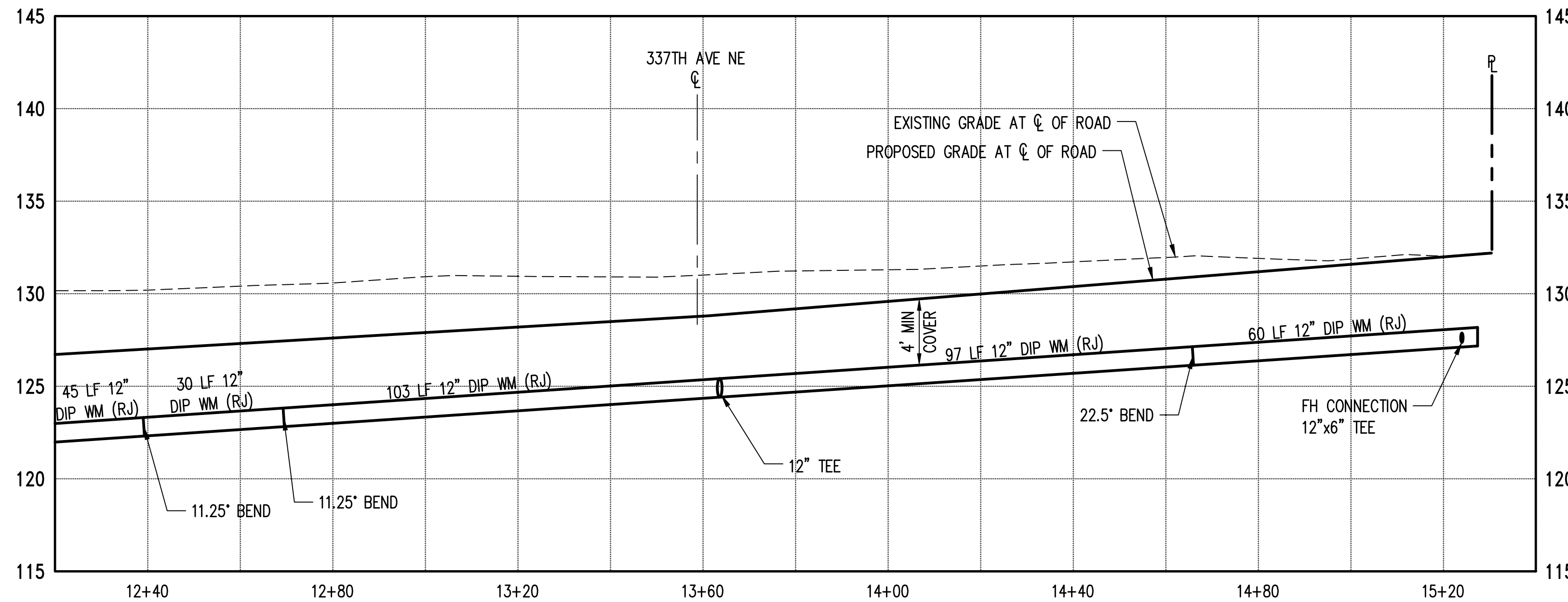
NE 42ND STREET WATER PLAN AND PROFILE

SHEET
C7.00

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.

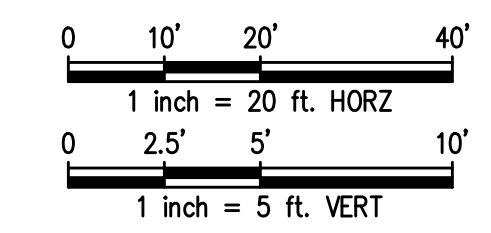
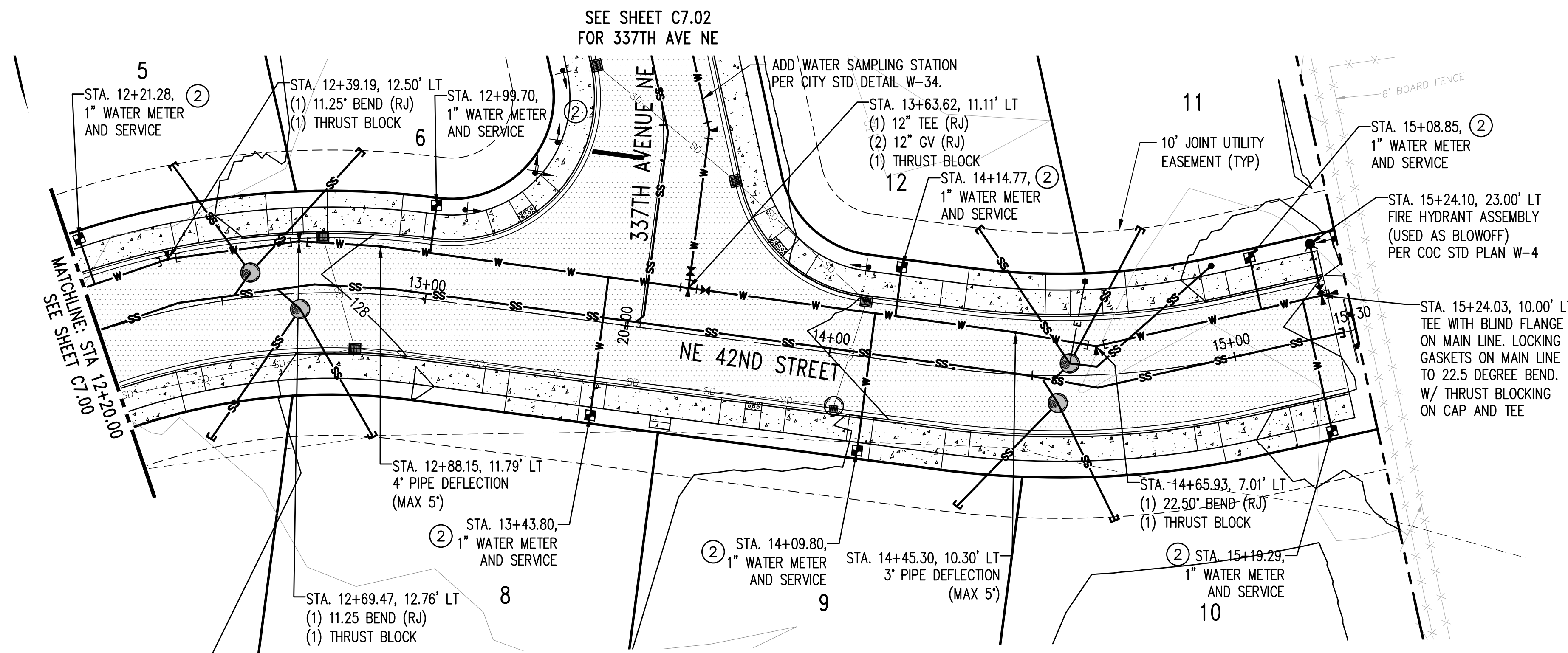
WATER NOTES:

1. ALL NEW WATER MAINS SHALL BE DUCTILE IRON PIPE AND SHALL CONFORM TO SECTION 7 OF THE CITY OF CARNATION (COC) COMBINED WATER AND SANITARY SEWER UTILITY TECHNICAL STANDARDS (CWSSUTS).
2. ALL WATER SERVICES SHALL BE 1-INCH SERVICE LINE TO A 5/8-INCH METER AND CONNECTION PER COC CWSSUTS WATER STANDARD DETAIL W-15, W-16 AND W-17
3. CITY INSPECTOR SHALL BE ON-SITE TO OBSERVE CONNECTIONS TO EXISTING WATER MAINS. CONTRACTOR SHALL COORDINATE WITH CITY INSPECTOR PRIOR TO CONNECTING TO EXISTING WATER MAIN.
4. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH COC CWSSUTS.
5. WATER MAINS LARGER THAN 8-INCHES SHALL HAVE A MINIMUM COVER OF 4- FEET.
6. INSTALL 2-INCH BLOW OFF ASSEMBLY PER COC WATER STANDARD DETAIL W-7.
7. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES.



LEGEND

- W — WATER MAIN
- WATER METER
- FIRE HYDRANT
- SS — SANITARY SEWER MAIN (SS)
- SS — SIDE SEWER STUB
- VALVE PIT
- - - - - EXISTING PROPERTY LINE
- — — — — PROPOSED PROPERTY LINE/ROW LINE
- - - - - CENTERLINE
- - - - - BUILDING SET BACK LINE
- - - - - EASEMENT LINE
- - - - - WETLAND BUFFER LINE
- - - - - CHANNEL MIGRATION ZONE (CMZ)
- - - - - OHWM (TRIBUTARY SIDE CHANNEL)
- - - - - SHORELINE JURISDICTION
- - - - - SHORELINE BUFFER
- - - - - FEMA FLOODWAY (100 YR FLOOD PLAIN)



Z:\2000001-2009999\2000639_Tolt Place\CAD\Design\CD-CITY\CD_C7.00_WTR_P&S.dwg Jun 06, 2023 - 9:21am RossC

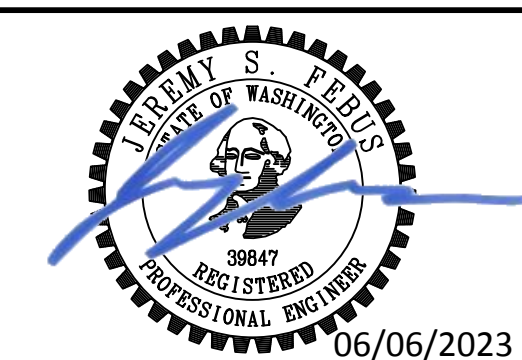
NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD
 DESIGNED BY WTJ
 CHECKED BY WTJ
 APPROVED BY JSF
 DATE 12/22/2022
 J O B No. :2000639

CALL TWO BUSINESS DAYS BEFORE YOU DIG 1-800-424-5555
 S C A L E: AS NOTED



1601 5th Avenue, Suite 1600
 Seattle, WA 98101
 206.622.5822
 www.kpff.com



TOLT PLACE
 CARNATION, WASHINGTON

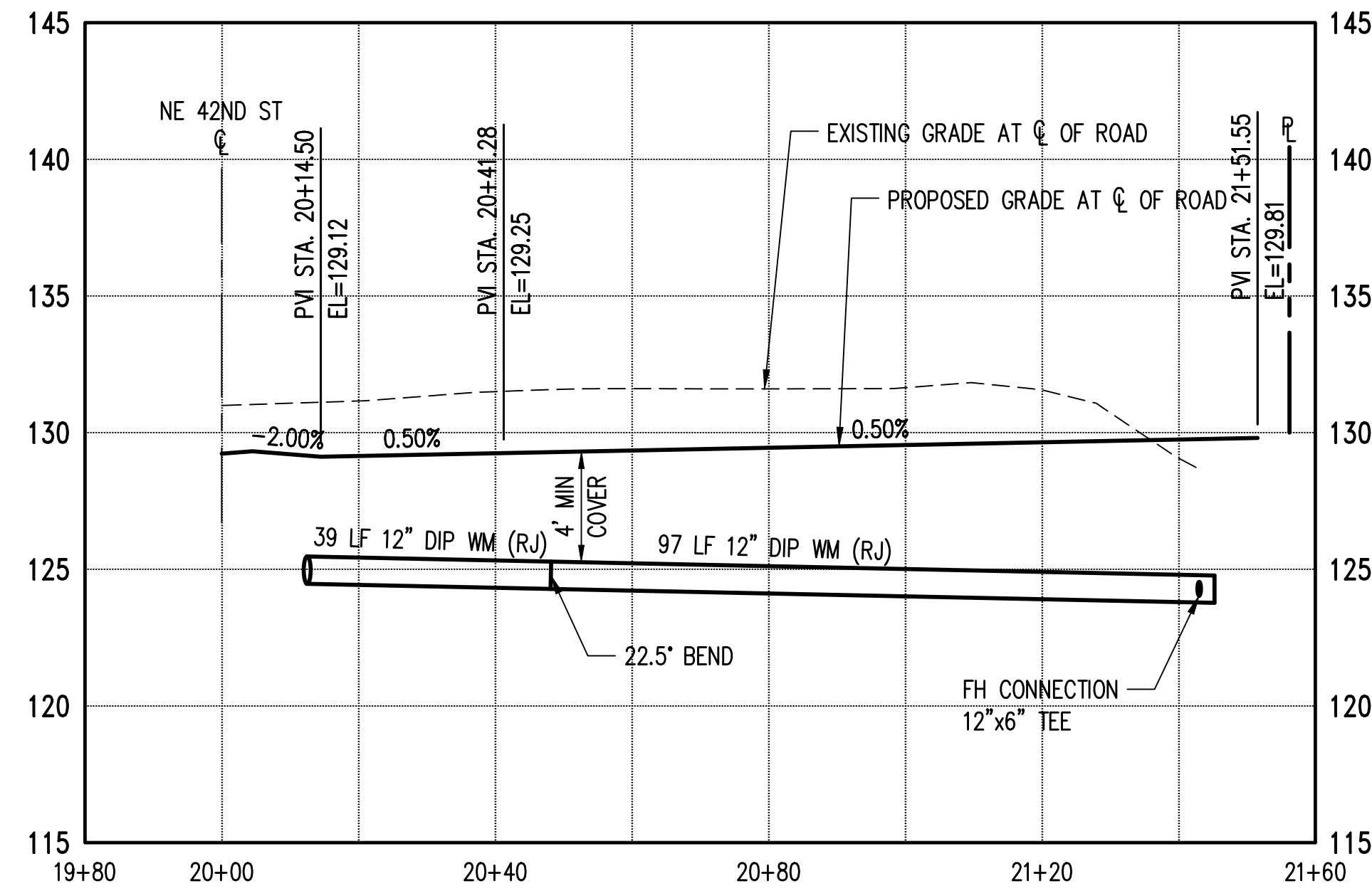
NE 42ND STREET WATER PLAN AND PROFILE

SHEET
C7.01

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.

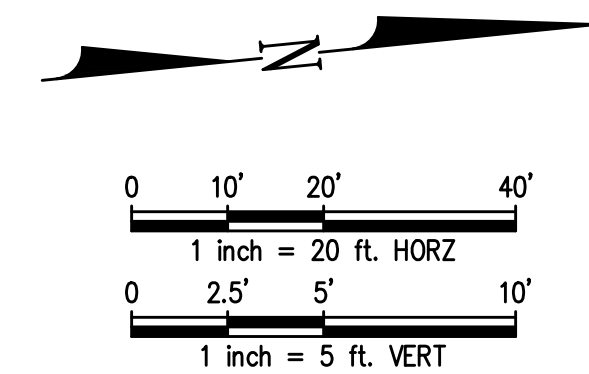
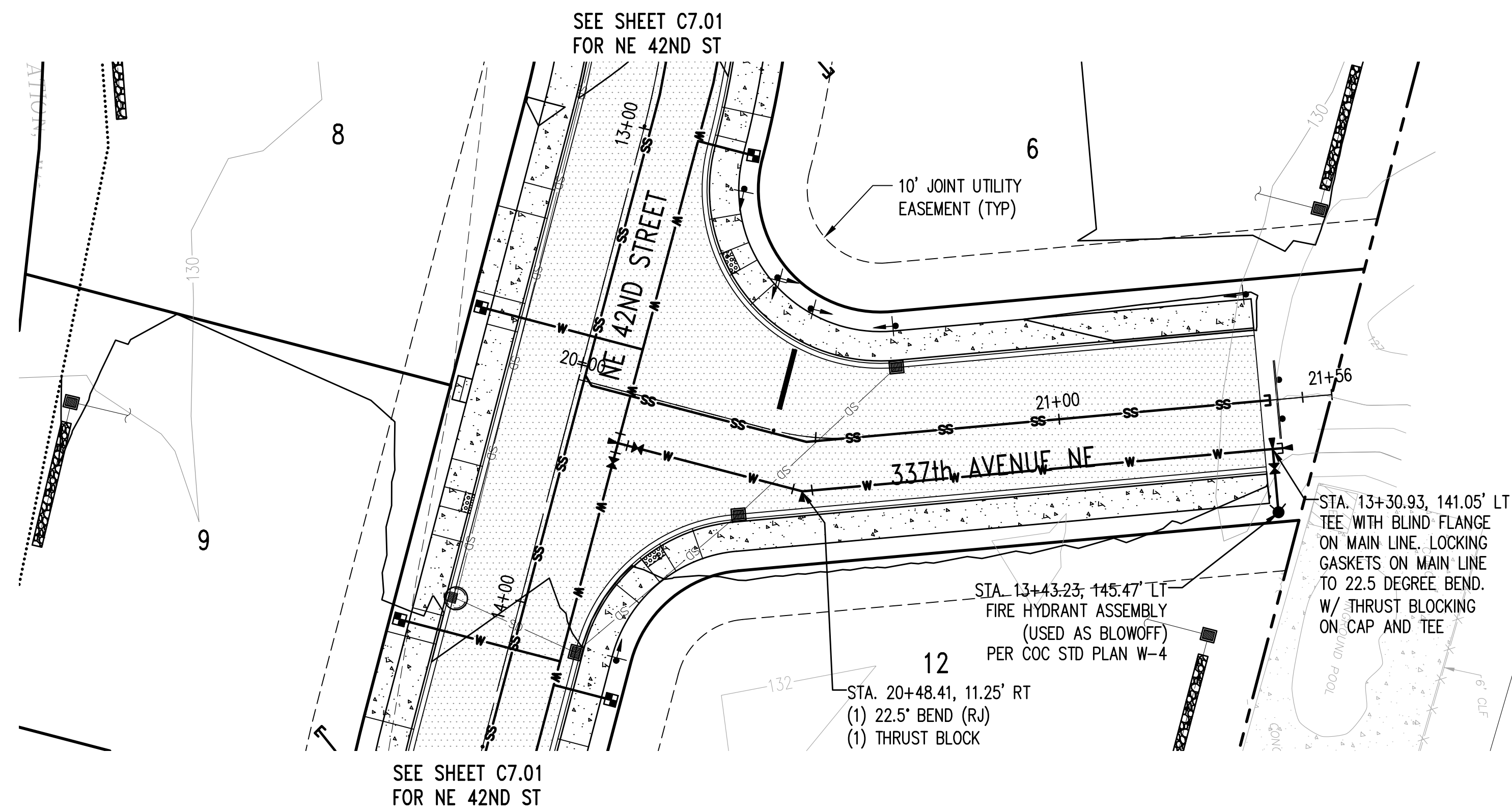
WATER NOTES:

1. ALL NEW WATER MAINS SHALL BE DUCTILE IRON PIPE AND SHALL CONFORM TO SECTION 7 OF THE CITY OF CARNATION (COC) COMBINED WATER AND SANITARY SEWER UTILITY TECHNICAL STANDARDS (CWSSUTS).
2. ALL WATER SERVICES SHALL BE 1-INCH SERVICE LINE TO A 5/8-INCH METER AND CONNECTION PER COC CWSSUTS WATER STANDARD DETAIL W-15, W-16 AND W-17
3. CITY INSPECTOR SHALL BE ON-SITE TO OBSERVE CONNECTIONS TO EXISTING WATER MAINS. CONTRACTOR SHALL COORDINATE WITH CITY INSPECTOR PRIOR TO CONNECTING TO EXISTING WATER MAIN.
4. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH COC CWSSUTS.
5. WATER MAINS LARGER THAN 8-INCHES SHALL HAVE A MINIMUM COVER OF 4- FEET.
6. INSTALL 2-INCH BLOW OFF ASSEMBLY PER COC WATER STANDARD DETAIL W-7.
7. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES.



LEGEND

- WATER MAIN
- WATER METER
- FIRE HYDRANT
- SANITARY SEWER MAIN (SS)
- SIDE SEWER STUB
- VALVE PIT
- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE/ROW LINE
- CENTERLINE
- BUILDING SET BACK LINE
- EASEMENT LINE
- WETLAND BUFFER LINE
- CHANNEL MIGRATION ZONE (CMZ)
- OHWM (TRIBUTARY SIDE CHANNEL)
- SHORELINE JURISDICTION
- SHORELINE BUFFER
- FEMA FLOODWAY (100 YR FLOOD PLAIN)



Z:\2000001-2009999\2000639_Tolt Place\CAD\Design\CD-CITY\CD_C7.00_WTR_P&S.dwg Jun 06, 2023 - 9:21am RossC

NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD
 DESIGNED BY WTJ
 CHECKED BY WTJ
 APPROVED BY JSF
 DATE 12/22/2022
 J O B No. :2000639

CALL TWO BUSINESS DAYS BEFORE YOU DIG 1-800-424-5555
 SCALE: AS NOTED



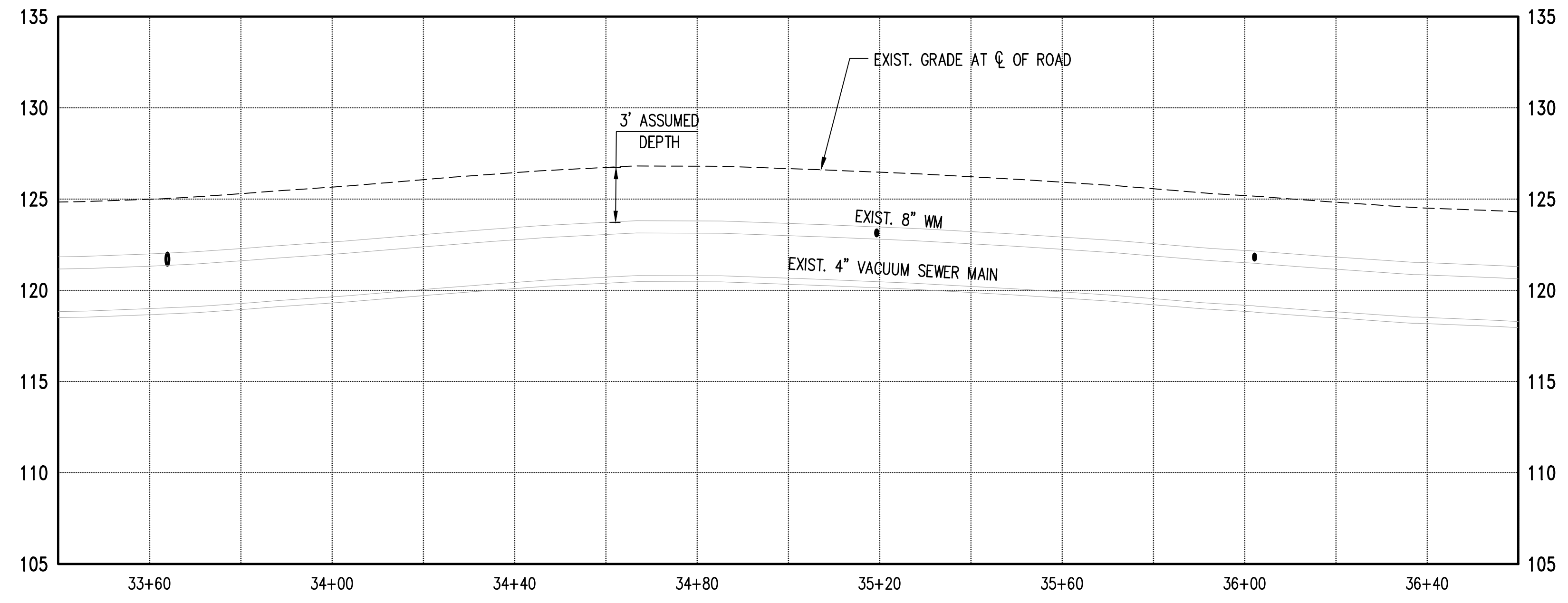
TOLT PLACE
 CARNATION, WASHINGTON
 337TH AVENUE NE WATER PLAN AND PROFILE

SHEET
C7.02

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.

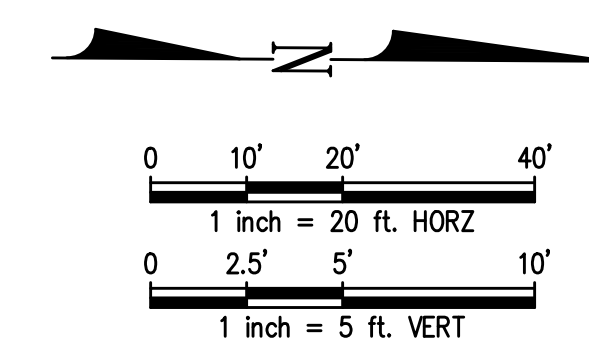
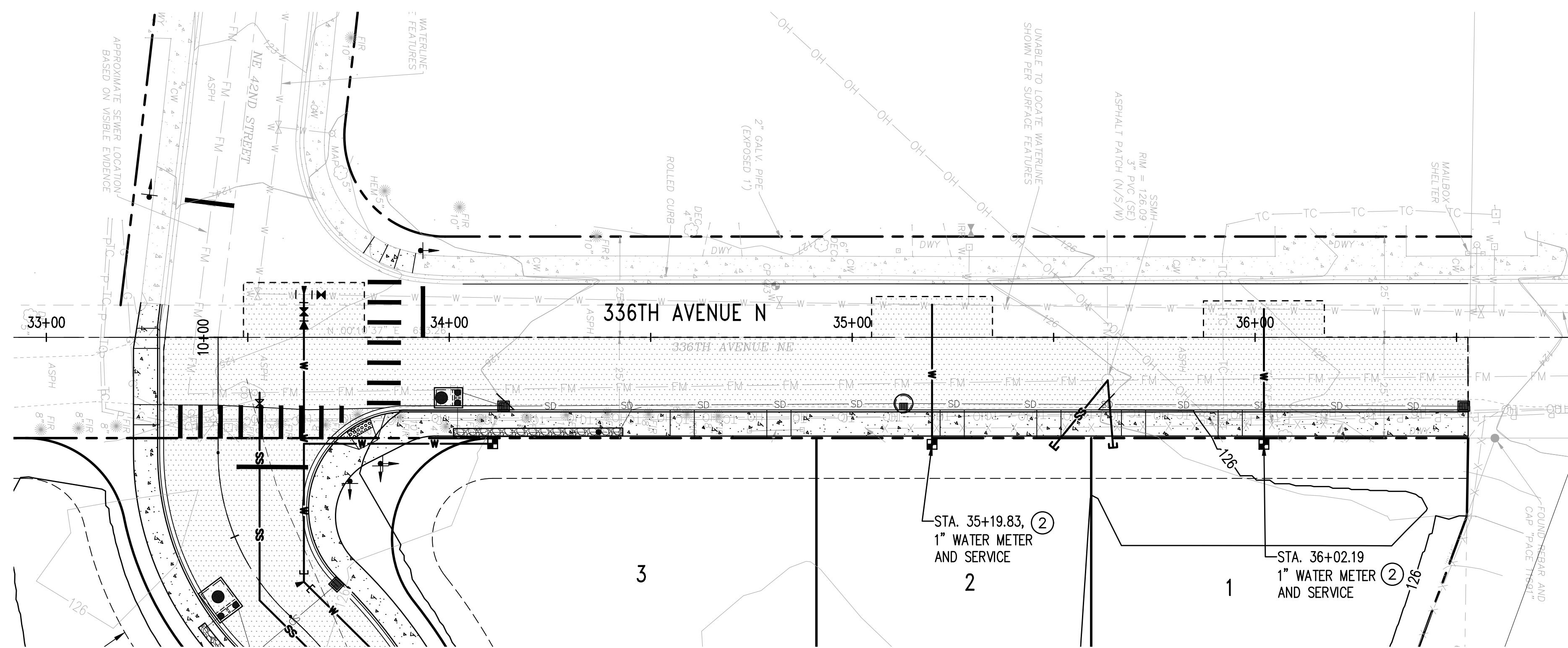
WATER NOTES:

1. ALL NEW WATER MAINS SHALL BE DUCTILE IRON PIPE AND SHALL CONFORM TO SECTION 7 OF THE CITY OF CARNATION (COC) COMBINED WATER AND SANITARY SEWER UTILITY TECHNICAL STANDARDS (CWSSUTS).
2. ALL WATER SERVICES SHALL BE 1-INCH SERVICE LINE TO A 5/8-INCH METER AND CONNECTION PER COC CWSSUTS WATER STANDARD DETAIL W-15, W-16 AND W-17
3. CITY INSPECTOR SHALL BE ON-SITE TO OBSERVE CONNECTIONS TO EXISTING WATER MAINS. CONTRACTOR SHALL COORDINATE WITH CITY INSPECTOR PRIOR TO CONNECTING TO EXISTING WATER MAIN.
4. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH COC CWSSUTS.
5. WATER MAINS LARGER THAN 8-INCHES SHALL HAVE A MINIMUM COVER OF 4-FEET.
6. INSTALL 2-INCH BLOW OFF ASSEMBLY PER COC WATER STANDARD DETAIL W-7.
7. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES.



LEGEND

- W — WATER MAIN
- WATER METER
- FIRE HYDRANT
- SS — SANITARY SEWER MAIN (SS)
- SS — SIDE SEWER STUB
- VALVE PIT
- - - - - EXISTING PROPERTY LINE
- — — — — PROPOSED PROPERTY LINE/ROW LINE
- — — — — CENTERLINE
- - - - - BUILDING SET BACK LINE
- - - - - EASEMENT LINE
- WETLAND BUFFER LINE
- - - - - CHANNEL MIGRATION ZONE (CMZ)
- - - - - OHWM (TRIBUTARY SIDE CHANNEL)
- - - - - SHORELINE JURISDICTION
- SHORELINE BUFFER
- - - - - FEMA FLOODWAY (100 YR FLOOD PLAIN)



Z:\2000001-2009999\2000639 Tolt Place\CAD\Design\CD-C7\CD C7.00 WTR PF.dwg
Jun 06, 2023 - 9:21am
RossC

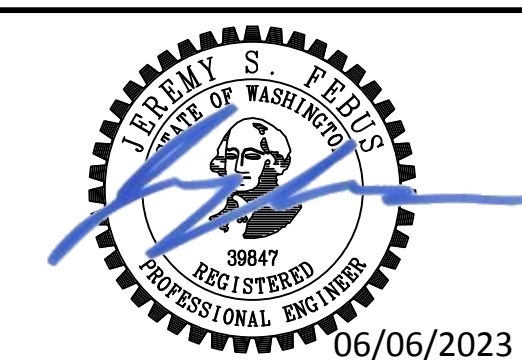
NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD
DESIGNED BY WTJ
CHECKED BY WTJ
APPROVED BY JSF
DATE 12/22/2022
J O B No. :2000639

CALL TWO BUSINESS DAYS BEFORE YOU DIG 1-800-424-5555
SCALE: AS NOTED



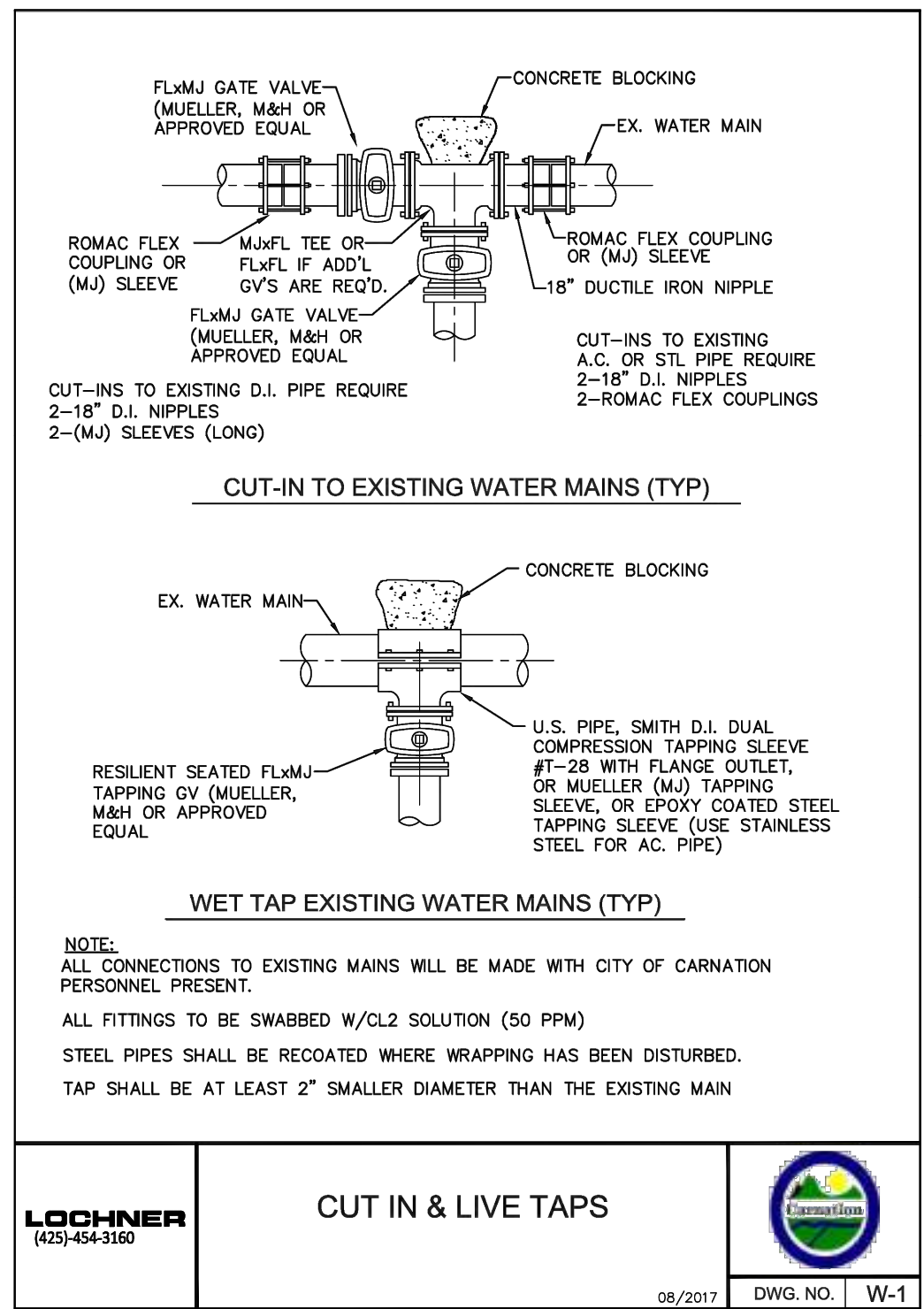
1601 5th Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
www.kpff.com



TOLT PLACE
CARNATION, WASHINGTON
336TH AVENUE NE WATER PLAN AND PROFILE

SHEET
C7.03

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.



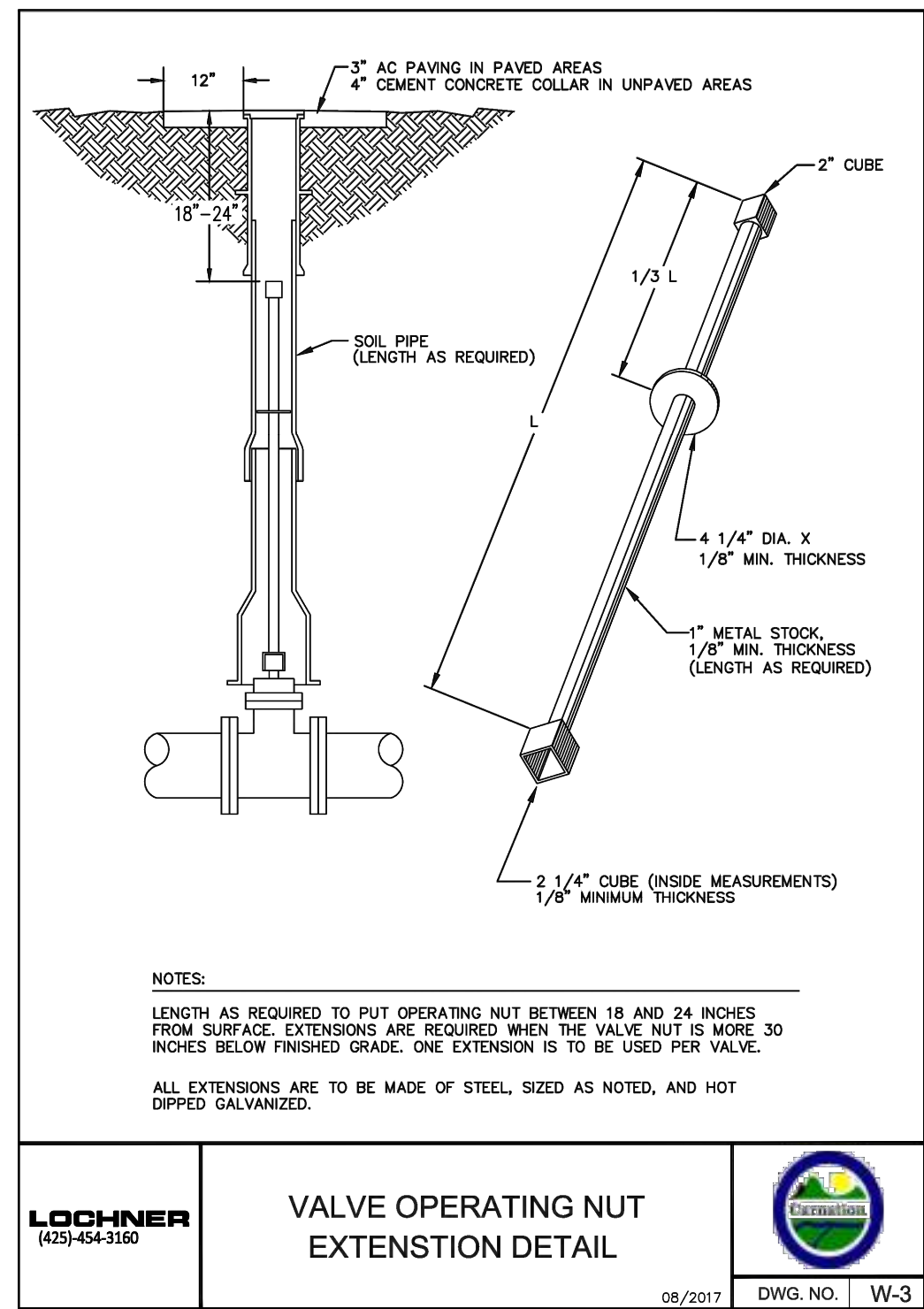
LOCHNER (425) 454-3160

CUT IN & LIVE TAPS

08/2017 DWG. NO. | W-1

CUT IN & LIVE TAPS
CITY OF CARNATION STD PLAN W-1

1
C7.00-C7.03



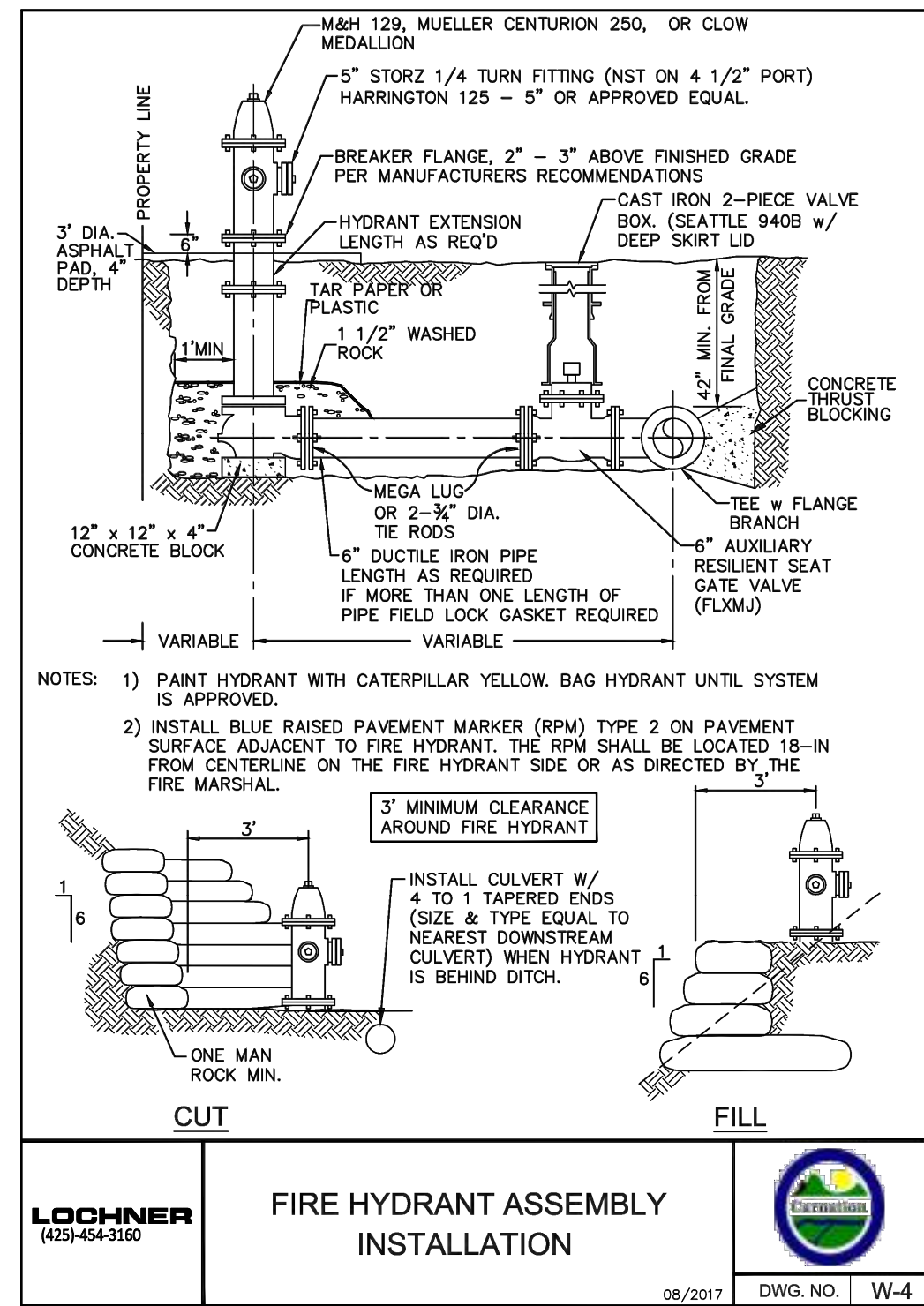
LOCHNER (425) 454-3160

VALVE OPERATING NUT EXTENSION DETAIL

08/2017 DWG. NO. | W-3

VALVE OPERATING NUT EXTENSION
CITY OF CARNATION STD PLAN W-3

2
C7.00-C7.03



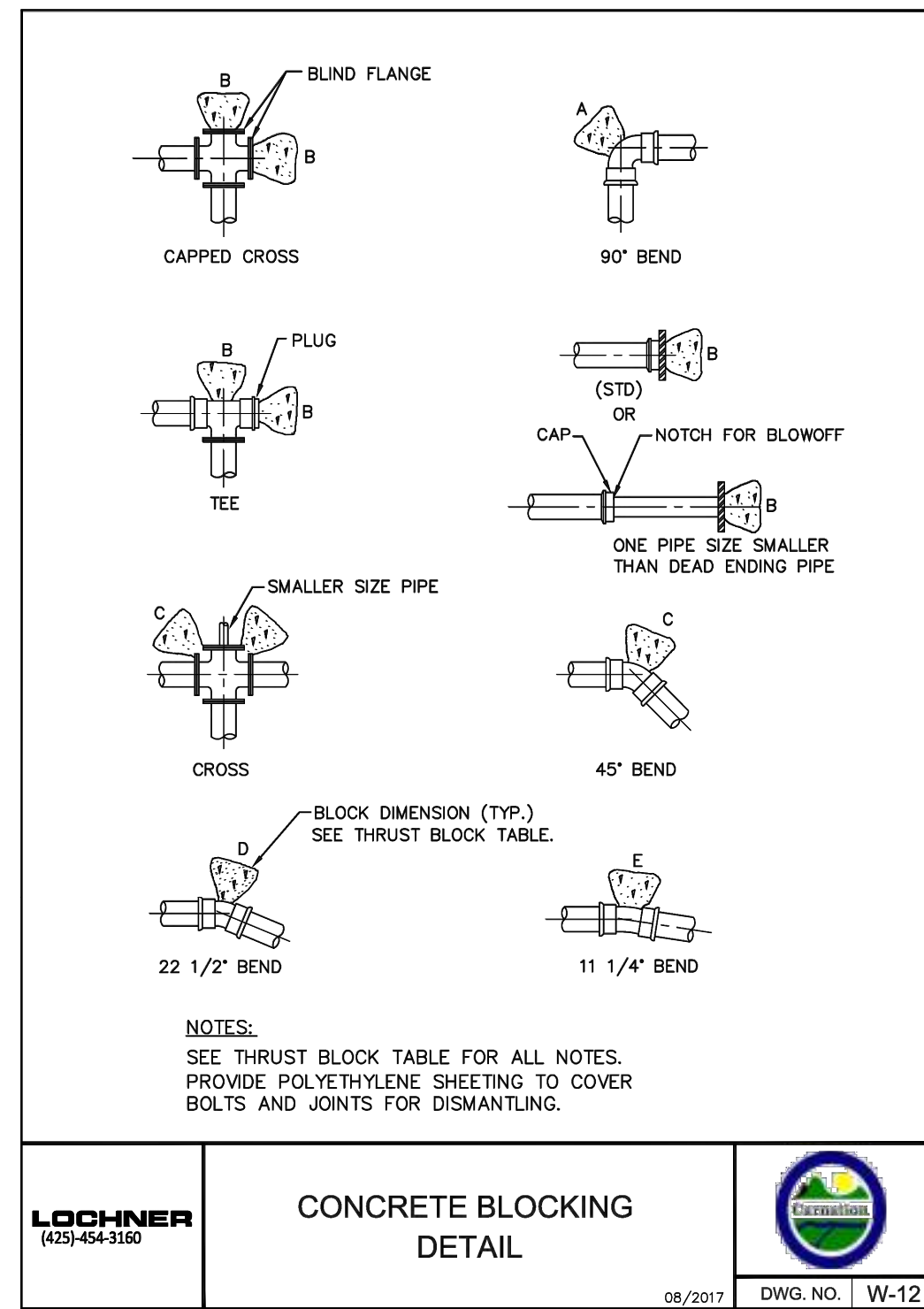
LOCHNER (425) 454-3160

FIRE HYDRANT ASSEMBLY INSTALLATION

08/2017 DWG. NO. | W-4

FIRE HYDRANT ASSEMBLY INSTALLATION
CITY OF CARNATION STD PLAN W-4

3
C7.00-C7.03



LOCHNER (425) 454-3160

CONCRETE BLOCKING DETAIL

08/2017 DWG. NO. | W-12

CONCRETE BLOCKING
CITY OF CARNATION STD PLAN W-12

4
C7.00-C7.03

THRUST BLOCK - TABLE
MIN. BEARING AREA AGAINST UNDISTURBED SOIL SQUARE FEET

PIPE SIZE	A (FT.2)	B (FT.2)	C (FT.2)	D (FT.2)	E (FT.2)
3"	3	2	2	2	2
4"	4	4	2	2	2
6"	7	6	4	2	2
8"	11	10	6	3	2
10"	16	14	9	5	3
12"	22	19	12	6	3
14"	29	25	16	8	4
16"	36	31	20	10	5
18"	45	39	24	13	6
20"	54	47	29	15	8
22"	64	56	35	18	9
24"	87	76	48	24	12
28"	101	87	55	28	14
30"	145	125	78	40	20
42"	197	171	107	55	27
48"	257	223	140	71	36

NOTES:
 1. BEARING AREA OF CONC. THRUST BLOCK BASED ON 200 PSI PRESSURE AND SAFE SOIL BEARING LOAD OF 2,000 POUNDS PER SQUARE FOOT.
 2. AREAS MUST BE ADJUSTED FOR OTHER PIPE SIZES, PRESSURES AND SOIL CONDITIONS.
 3. CONCRETE BLOCKING SHALL BE CAST IN PLACE AND HAVE A MINIMUM BEARING SURFACE OF 6" X 6" SQUARE AGAINST THE FITTING.
 4. BLOCK SHALL BEAR AGAINST FITTINGS ONLY AND SHALL BE CLEAR OF JOINTS TO PERMIT TAKING UP OR DISMANTLING OF JOINT.
 5. CONTRACTOR SHALL INSTALL BLOCKING ADEQUATE TO WITHSTAND FULL TEST PRESSURE AS WELL AS TO CONTINUOUSLY WITHSTAND OPERATION PRESSURE UNDER ALL CONDITIONS OF SERVICE.
 6. ALL BOLTS AND NUTS SHALL BE POLYWRAPPED PRIOR TO POURING CONCRETE.

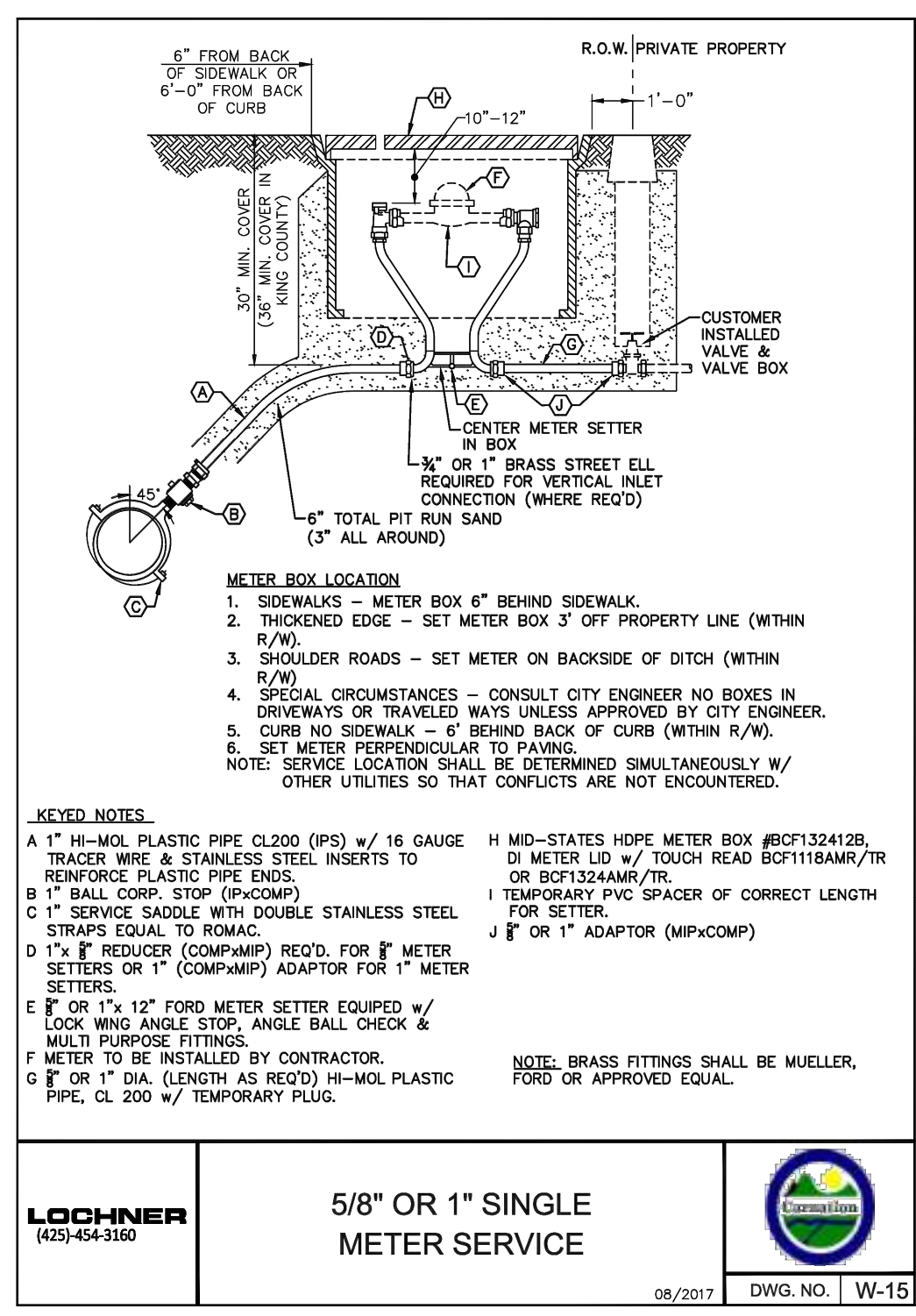
LOCHNER (425) 454-3160

THRUST BLOCK TABLE

08/2017 DWG. NO. | W-13

THRUST BLOCK TABLE
CITY OF CARNATION STD PLAN W-13

5
C7.00-C7.03



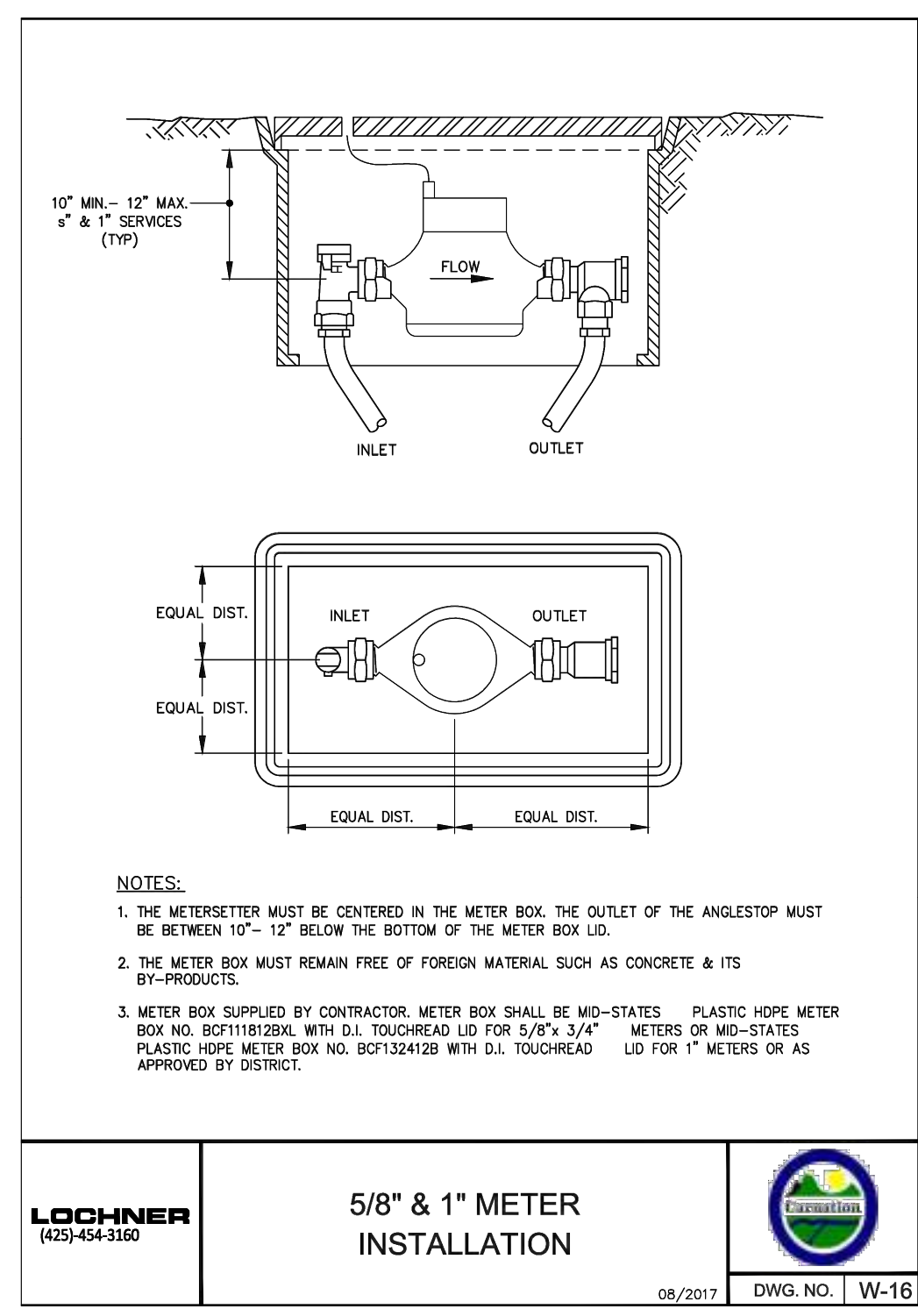
LOCHNER (425) 454-3160

5/8" OR 1" SINGLE METER SERVICE

08/2017 DWG. NO. | W-15

5/8" OR 1" SINGLE METER SERVICE
CITY OF CARNATION STD PLAN W-15

6
C7.00-C7.03



LOCHNER (425) 454-3160

5/8" & 1" METER INSTALLATION

08/2017 DWG. NO. | W-16

5/8" & 1" METER INSTALLATION
CITY OF CARNATION STD PLAN W-16

7
C7.00-C7.03

Z:\2000001-209999\2000039 Toll Place\CAD\Design\CD-CITY\CD C7.10 WTRD DTS.dwg
Jun 06, 2023 - 9:21am
RossC

NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD
 DESIGNED BY WTJ
 CHECKED BY WTJ
 APPROVED BY JSF
 DATE 12/22/2022
 J O B No. :2000639

CALL TWO BUSINESS DAYS BEFORE YOU DIG
1-800-424-5555

SCALE:
AS NOTED



1601 5th Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
www.kpff.com

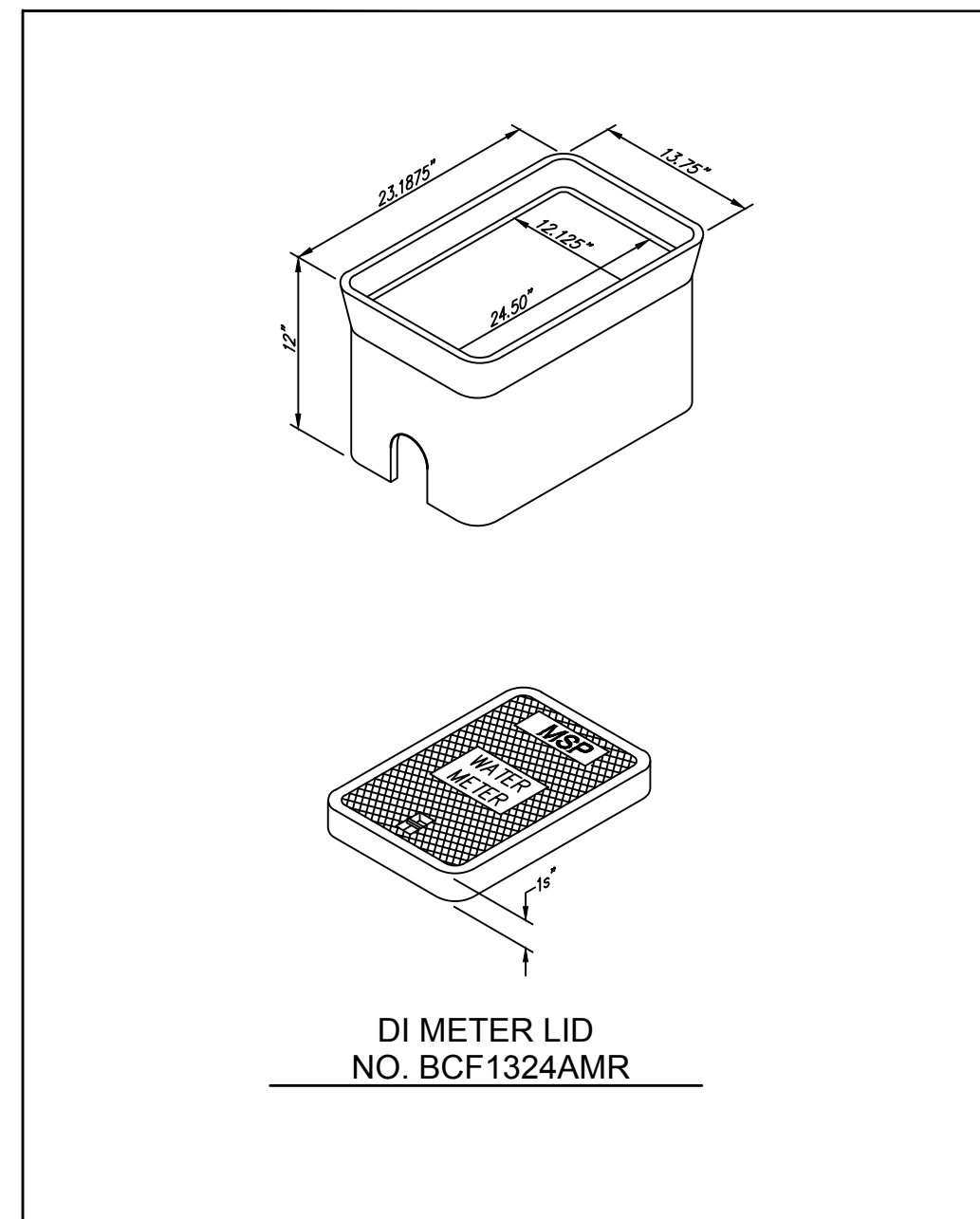


TOLT PLACE
CARNATION, WASHINGTON

WATER DETAILS

SHEET
C7.10

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.



DI METER LID
NO. BCF1324AMR

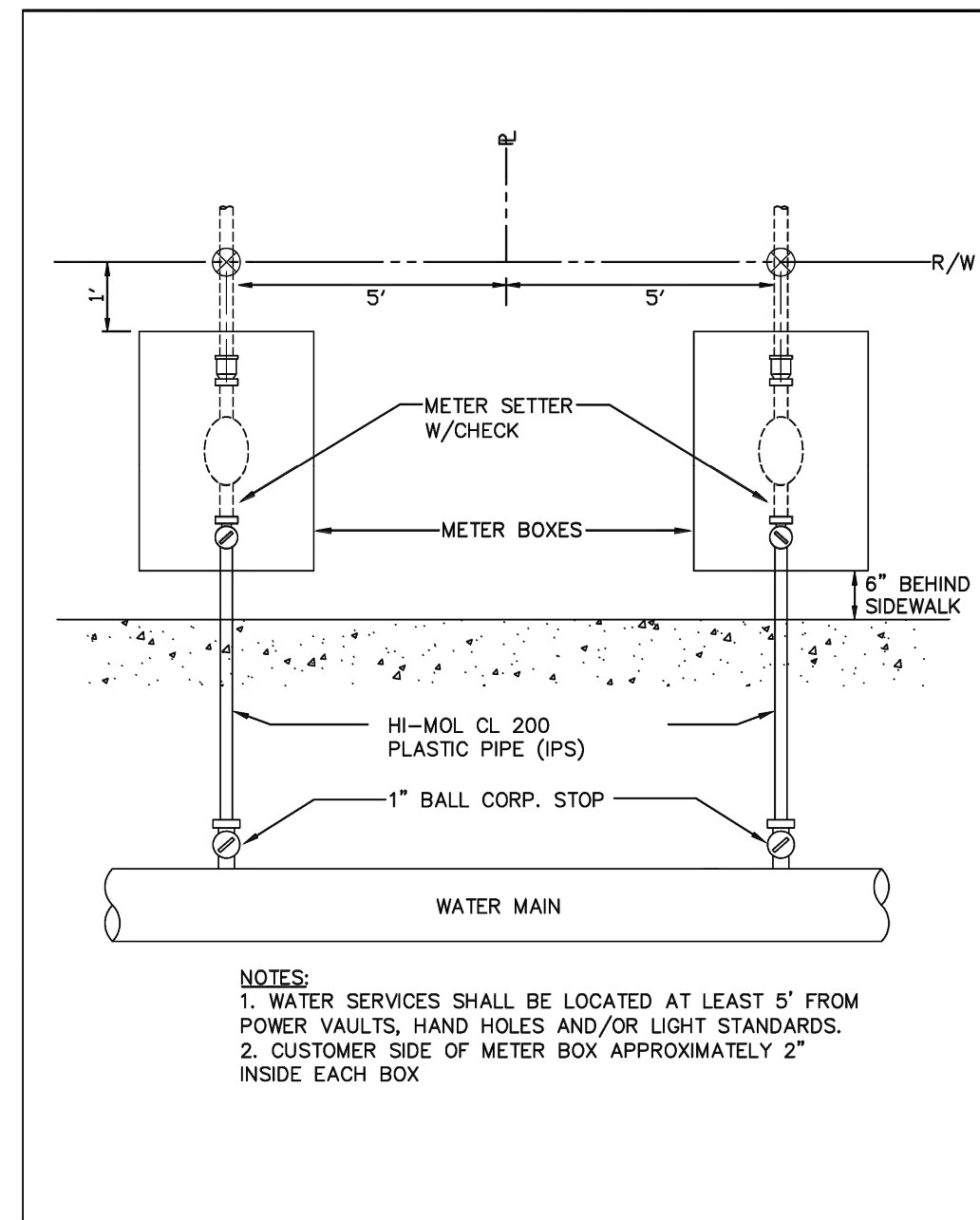
LOCHNER
(425) 454-3160

HDPE METER BOX NO. BCF132412B
FOR 5/8" & 1" METER

08/2017 DWG. NO. W-17

HDPE METER BOX NO. BCF132412B
FOR 5/8" & 1" METER
CITY OF CARNATION STD PLAN W-17

8
C7.00-C7.03



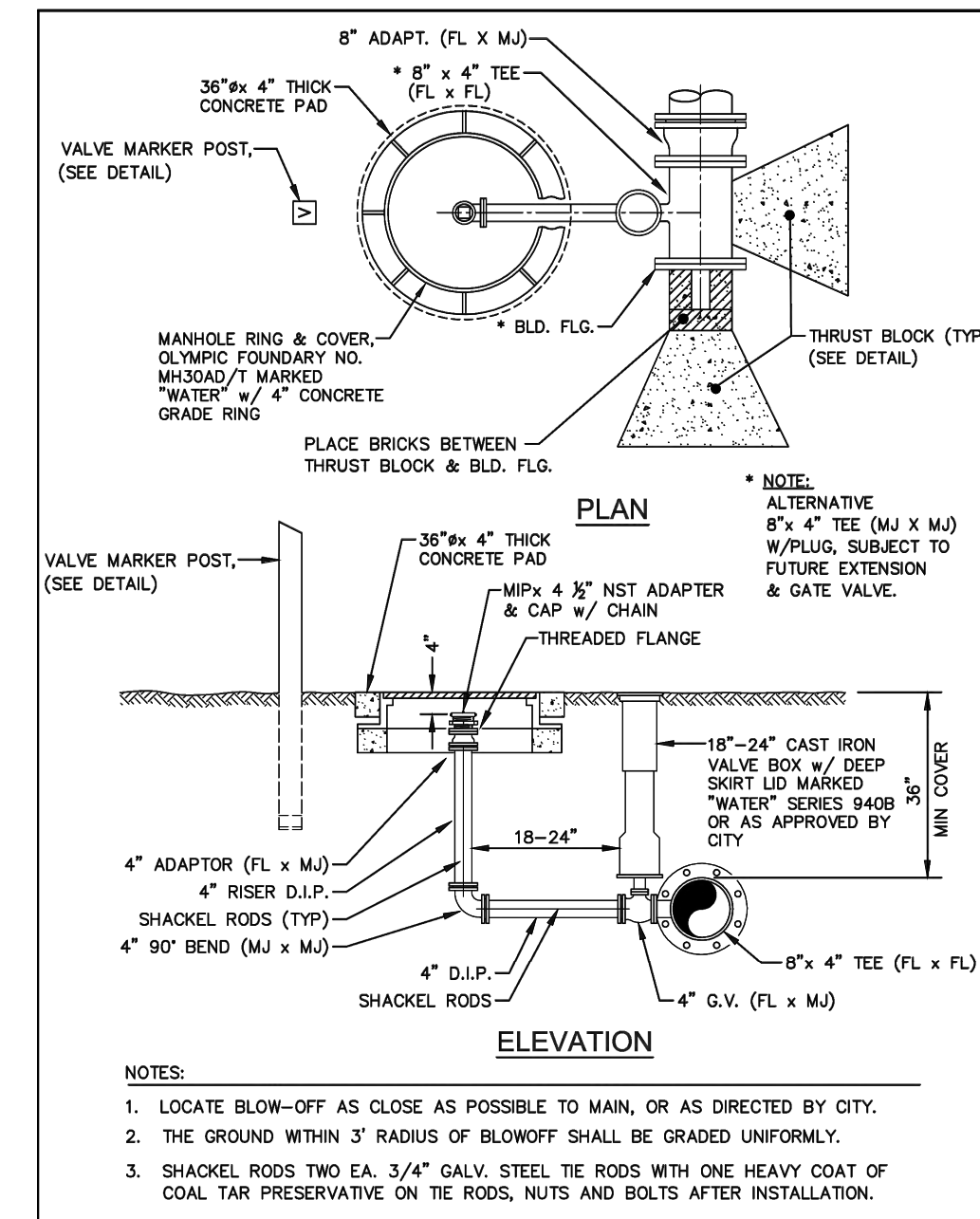
LOCHNER
(425) 454-3160

PAIRED WATER SERVICE
LOCATION DIAGRAM

08/2017 DWG. NO. W-18

PAIRED WATER SERVICE LOCATION
CITY OF CARNATION STD PLAN W-18

9
C7.00-C7.03



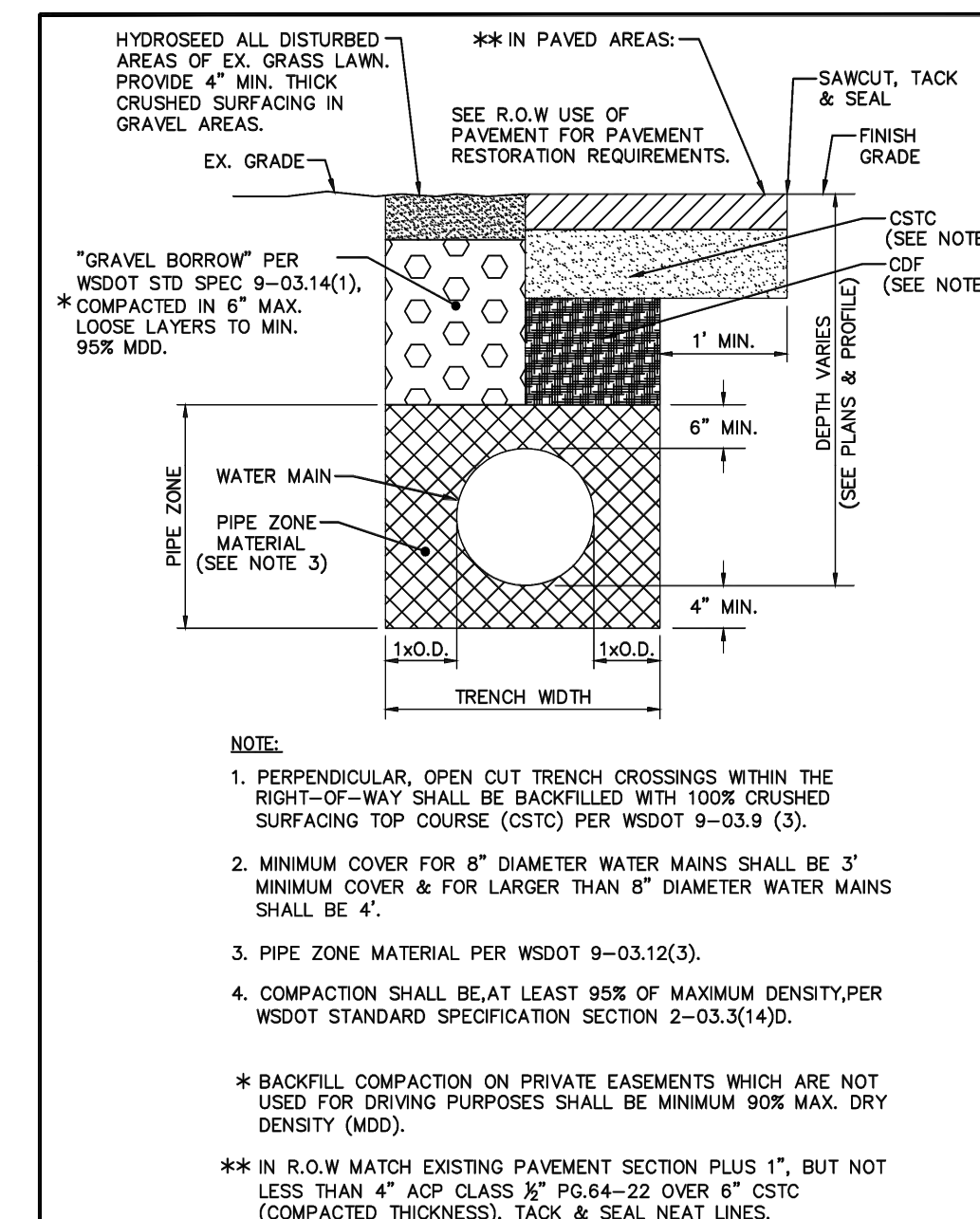
LOCHNER
(425) 454-3160

OFF PAVING 4" BLOWOFF ASSY.
FOR 8" & LARGER MAINS

08/2017 DWG. NO. W-8

OFF PAVING 4" BLOWOFF ASSEMBLY
FOR 8" & LARGER MAINS
CITY OF CARNATION STD PLAN W-8

10
C7.00-C7.03



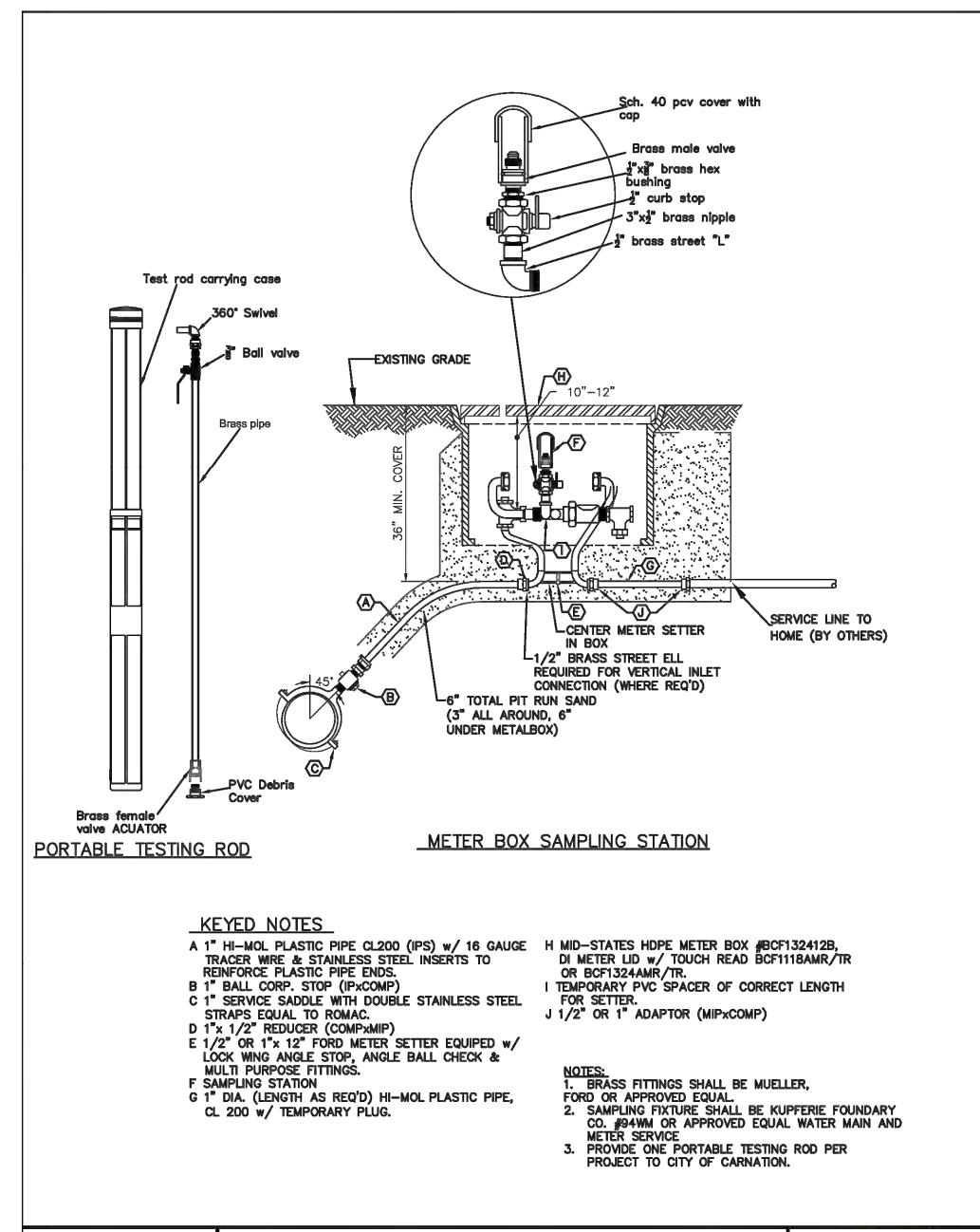
LOCHNER
(425) 454-3160

TYPICAL TRENCH DETAIL

08/2017 DWG. NO. W-32

TYPICAL TRENCH
CITY OF CARNATION STD PLAN W-32

11
C7.00-C7.03



LOCHNER
(425) 454-3160

WATER
SAMPLING STATION

08/2017 DWG. NO. W-34

WATER SAMPLING STATION
CITY OF CARNATION STD PLAN W-34

12
C7.01

Z:\20000001-2009999\2000639 Toll Place\CAD\Design\CD-CITY\CD C7.10 WTRD DTL5.dwg Jun 06, 2023 - 9:21am RossC

DRAWN BY	DESIGNED BY
TAD	WTJ
CHECKED BY	APPROVED BY
WTJ	JSF
DATE	
12/22/2022	
J O B No. : 2000639	

CALL TWO BUSINESS
DAYS BEFORE YOU DIG
1-800-424-5555

SCALE:
AS NOTED



1601 5th Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
www.kpff.com



TOLT PLACE
CARNATION, WASHINGTON

WATER DETAILS

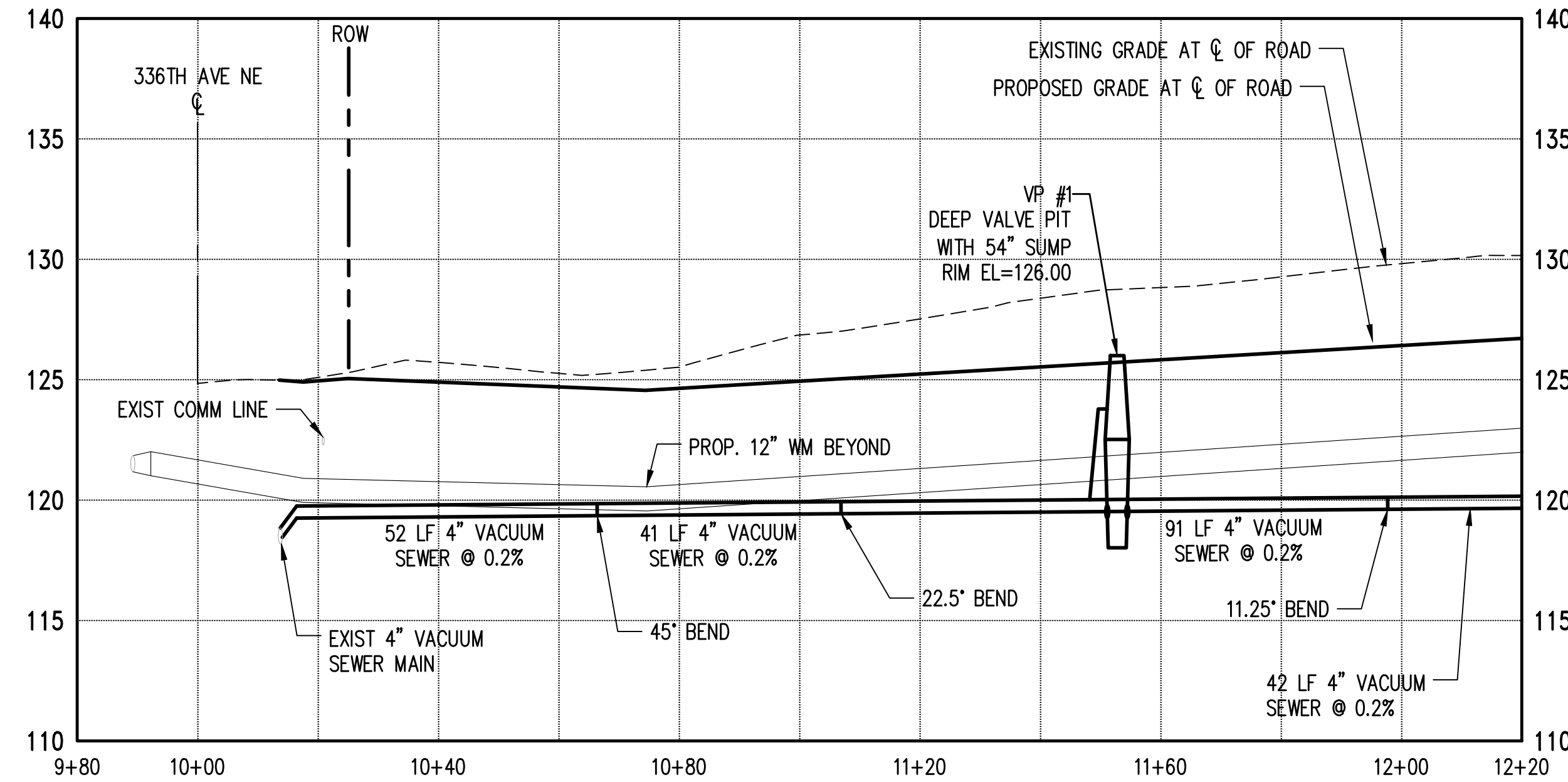
SHEET

C7.20

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.

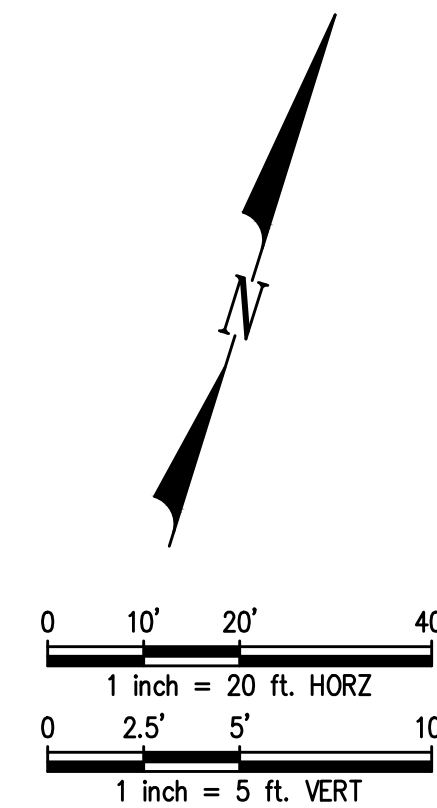
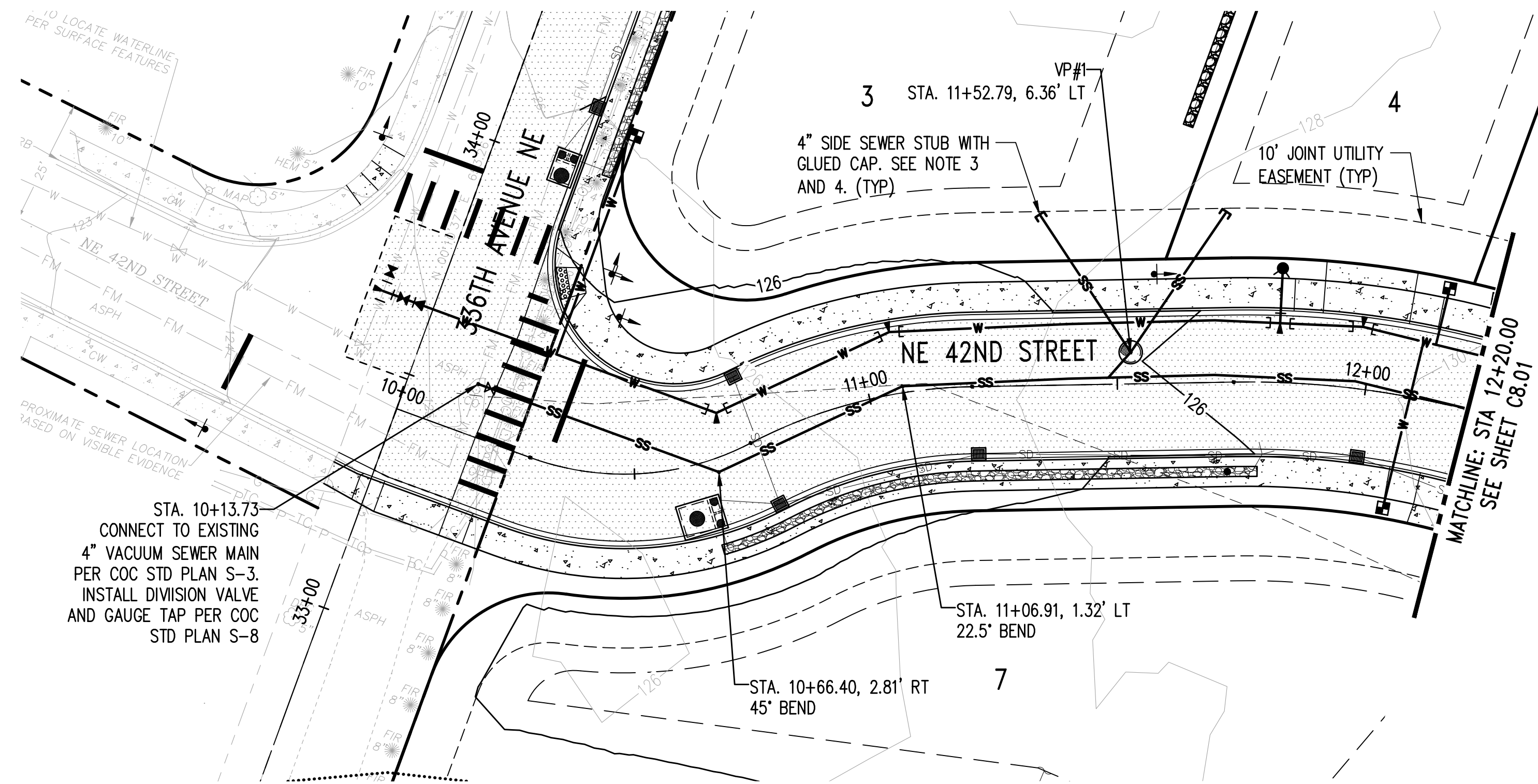
SEWER NOTES:

1. ALL NEW VACUUM SEWER MAINS SHALL BE PVC SCH40 OR SDR21 AND SHALL CONFORM TO SECTION 8 OF THE CITY OF CARNATION (COC) COMBINED WATER AND SANITARY SEWER UTILITY TECHNICAL STANDARDS (CWSSUTS).
2. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH COC CWSSUTS.
3. VALVE PIT AND SANITARY SIDE SEWERS SHALL BE PER COC SEWER STANDARD DETAIL S-5, S-6, S-9 AND S-10. VALVE PIT LIDS SHALL BE TRAFFIC RATED H20.
4. ALL NEW SANITARY SIDE SEWERS SHALL BE PVC SDR35 OR SDR21.
5. VACUUM SEWER MAINS LARGER THAN 4-INCHES SHALL HAVE A MINIMUM COVER OF 4-FEET.
6. CONTRACTOR SHALL POTHOLE AND VERIFY DEPTH OF EXISTING VACUUM SEWER MAIN A MINIMUM OF 5 DAYS PRIOR TO SCHEDULED CONNECTION OF VACUUM SEWER BRANCH.



LEGEND

- W — WATER MAIN
- WATER METER
- FIRE HYDRANT
- SS — SANITARY SEWER MAIN (SS)
- E — SS — SIDE SEWER STUB
- VALVE PIT
- - - - - EXISTING PROPERTY LINE
- — — — — PROPOSED PROPERTY LINE/ROW LINE
- — — — — CENTERLINE
- - - - - BUILDING SET BACK LINE
- - - - - EASEMENT LINE
- - - - - WETLAND BUFFER LINE
- - - - - CHANNEL MIGRATION ZONE (CMZ)
- - - - - OHWM (TRIBUTARY SIDE CHANNEL)
- - - - - SHORELINE JURISDICTION
- - - - - SHORELINE BUFFER
- - - - - FEMA FLOODWAY (100 YR FLOOD PLAIN)



Jun 06, 2023 - 9:21am
 RossC
 Z:\2000001-2009999\2000639 Toll Place\CAD\Design\CD-CITY\CD_C8.00 SS_PP.dwg

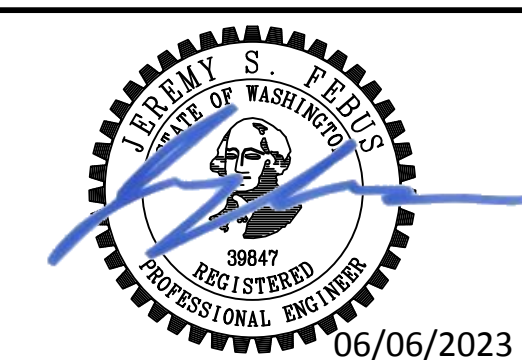
NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD
 DESIGNED BY WTJ
 CHECKED BY WTJ
 APPROVED BY JSF
 DATE 12/22/2022
 J O B No. :2000639

CALL TWO BUSINESS DAYS BEFORE YOU DIG 1-800-424-5555
 SCALE: AS NOTED



1601 5th Avenue, Suite 1600
 Seattle, WA 98101
 206.622.5822
 www.kpff.com



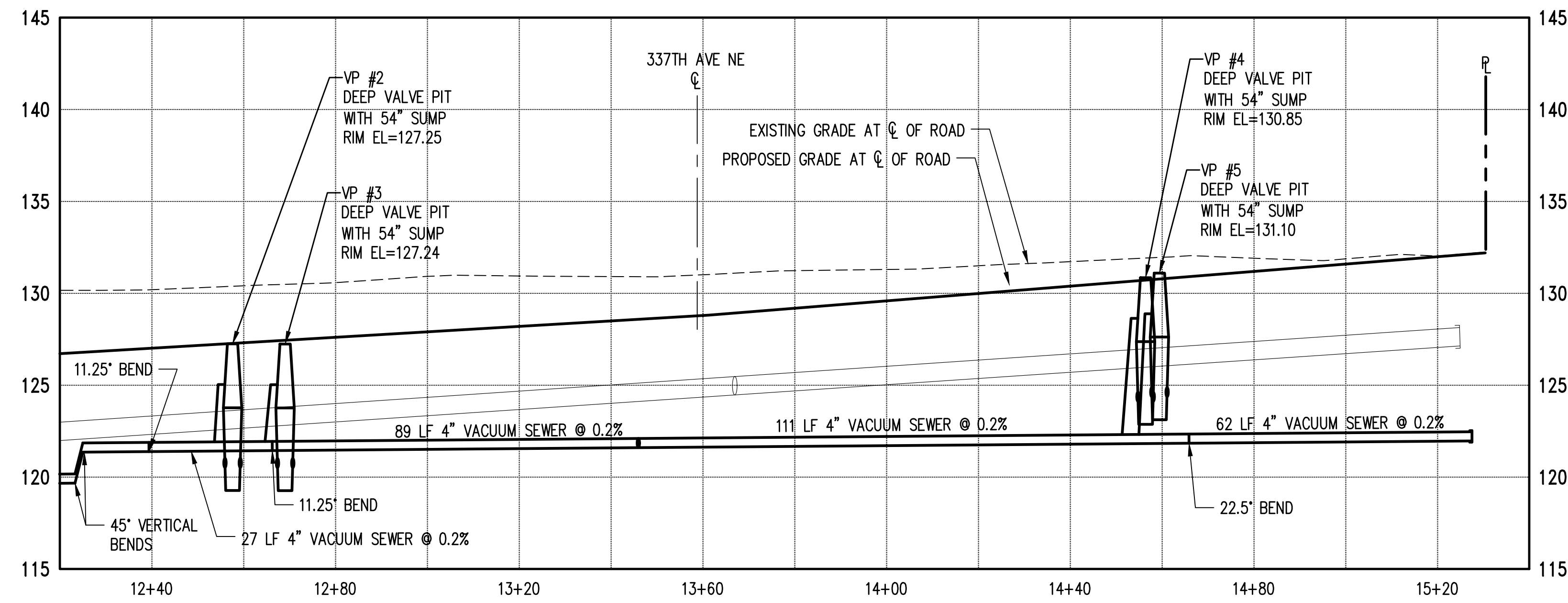
TOLT PLACE
 CARNATION, WASHINGTON
NE 42ND STREET SEWER PLAN AND PROFILE

SHEET
C8.00

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.

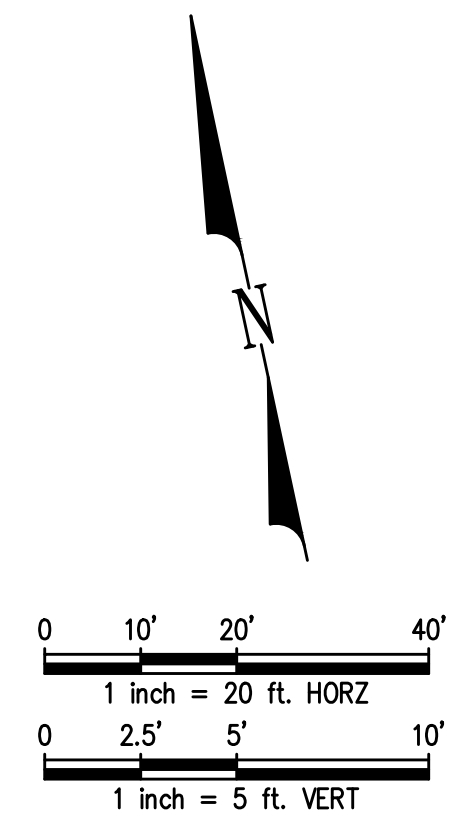
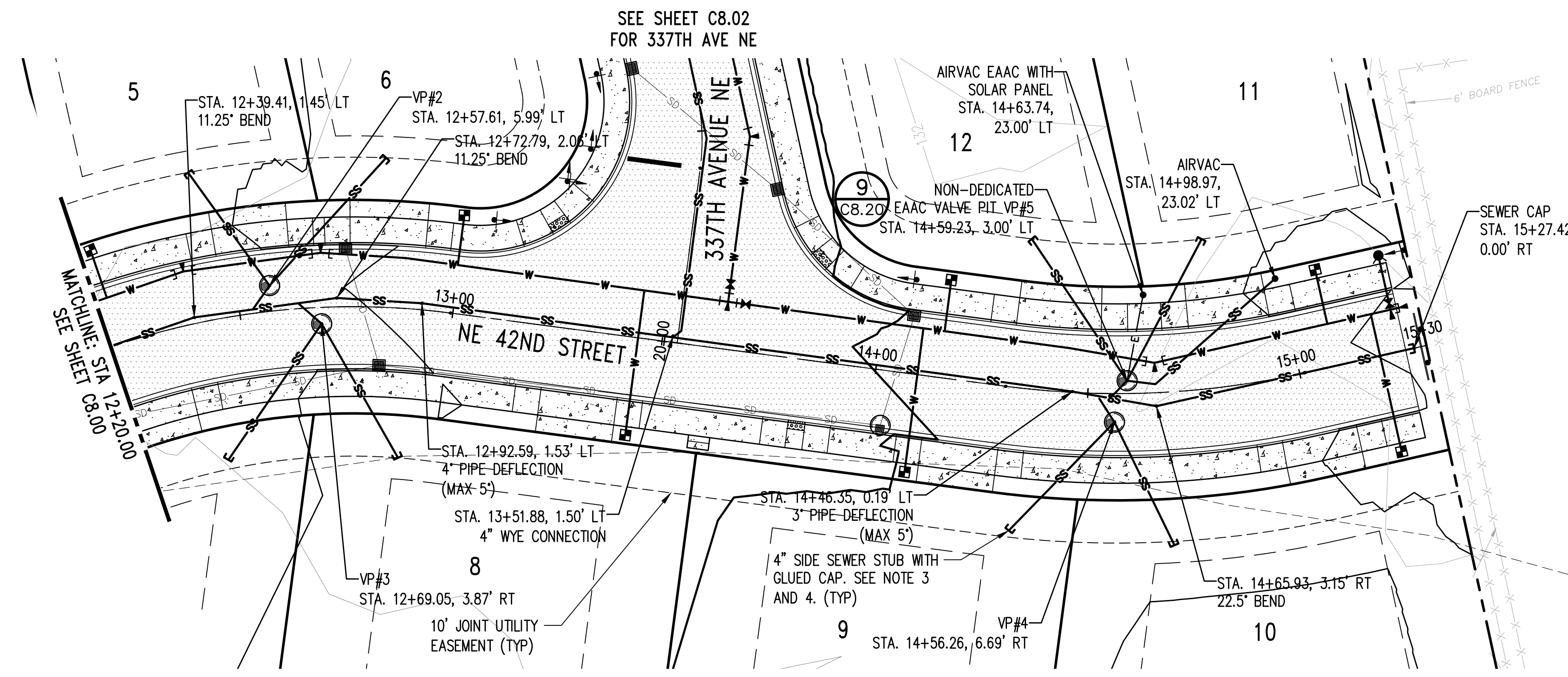
SEWER NOTES:

1. ALL NEW VACUUM SEWER MAINS SHALL BE PVC SCH40 OR SDR21 AND SHALL CONFORM TO SECTION 8 OF THE CITY OF CARNATION (COC) COMBINED WATER AND SANITARY SEWER UTILITY TECHNICAL STANDARDS (CWSSUTS).
2. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH COC CWSSUTS.
3. VALVE PIT AND SANITARY SIDE SEWERS SHALL BE PER COC SEWER STANDARD DETAIL S-5, S-6, S-9 AND S-10. VALVE PIT LIDS SHALL BE TRAFFIC RATED H20.
4. ALL NEW SANITARY SIDE SEWERS SHALL BE PVC SDR35 OR SDR21.
5. VACUUM SEWER MAINS LARGER THAN 4-INCHES SHALL HAVE A MINIMUM COVER OF 4- FEET.
6. CONTRACTOR SHALL POTHOLE AND VERIFY DEPTH OF EXISTING VACUUM SEWER MAIN A MINIMUM OF 5 DAYS PRIOR TO SCHEDULED CONNECTION OF VACUUM SEWER BRANCH.



LEGEND

- WATER MAIN
- WATER METER
- FIRE HYDRANT
- SANITARY SEWER MAIN (SS)
- SIDE SEWER STUB
- VALVE PIT
- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE/ROW LINE
- CENTERLINE
- BUILDING SET BACK LINE
- EASEMENT LINE
- WETLAND BUFFER LINE
- CHANNEL MIGRATION ZONE (CMZ)
- OHWM (TRIBUTARY SIDE CHANNEL)
- SHORELINE JURISDICTION
- SHORELINE BUFFER
- FEMA FLOODWAY (100 YR FLOOD PLAIN)



Jun 06, 2023 - 9:22am
 RossC
 Z:\2000001-2009999\2000639 Toll Place\CAD\Design\CD-CITY\CD_C8.01 SS_PP.dwg

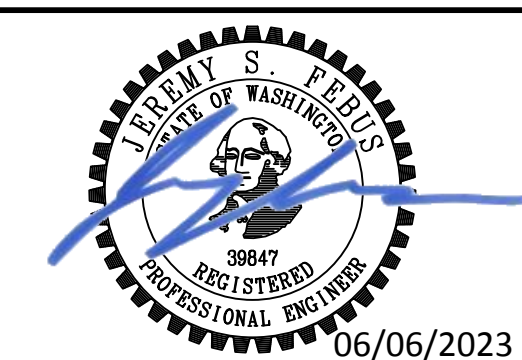
NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD
 DESIGNED BY WTJ
 CHECKED BY WTJ
 APPROVED BY JSF
 DATE 12/22/2022
 J O B No. :2000639

CALL TWO BUSINESS DAYS BEFORE YOU DIG 1-800-424-5555
 SCALE: AS NOTED



1601 5th Avenue, Suite 1600
 Seattle, WA 98101
 206.622.5822
 www.kpff.com



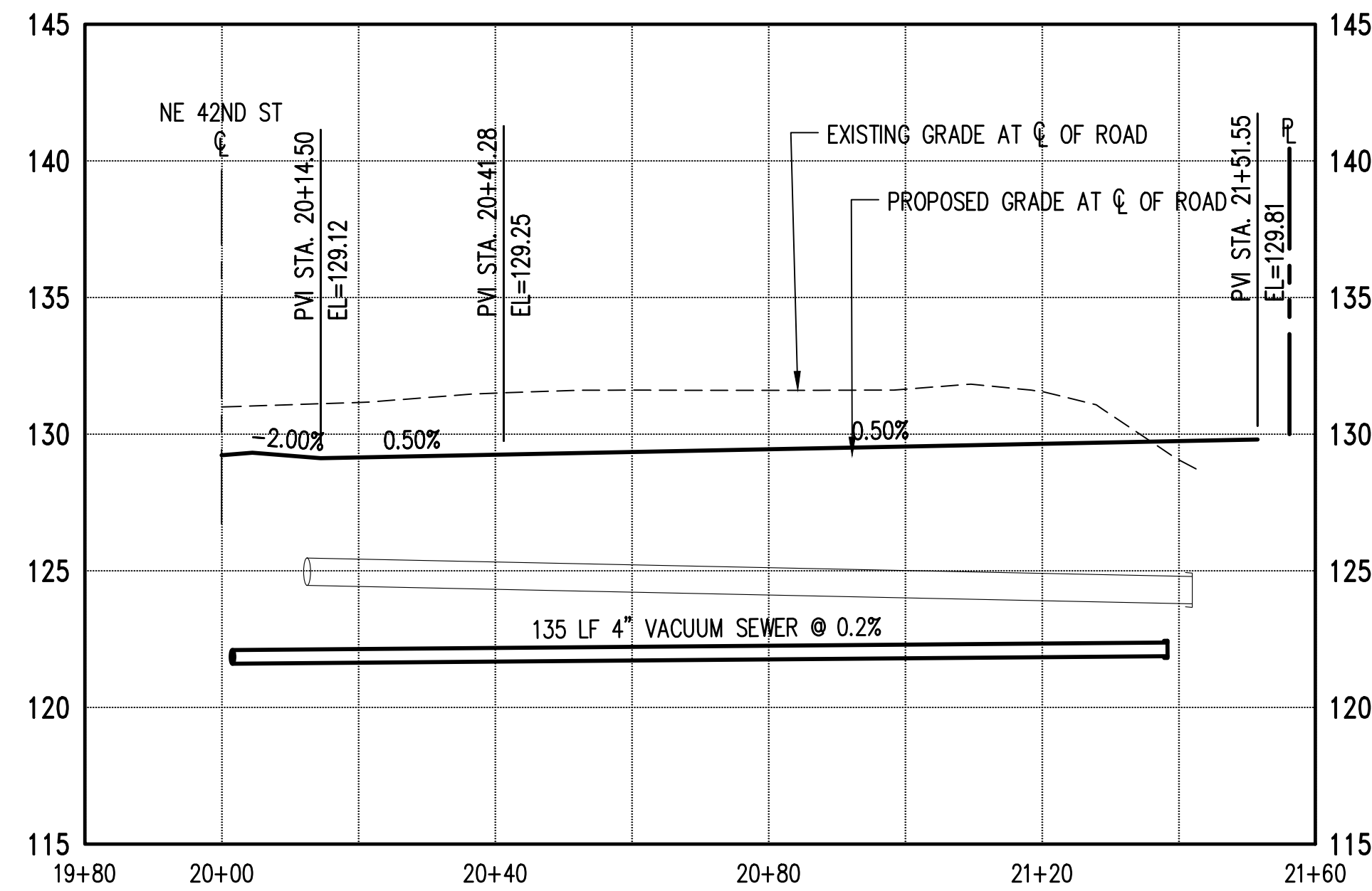
TOLT PLACE
 CARNATION, WASHINGTON
 NE 42ND STREET SEWER PLAN AND PROFILE

SHEET
 C8.01

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.

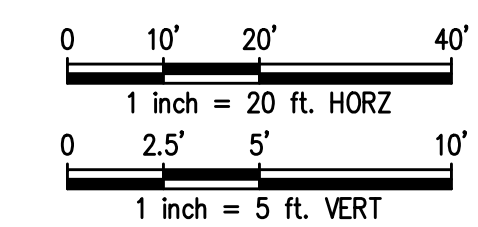
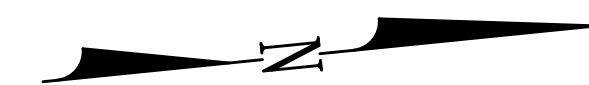
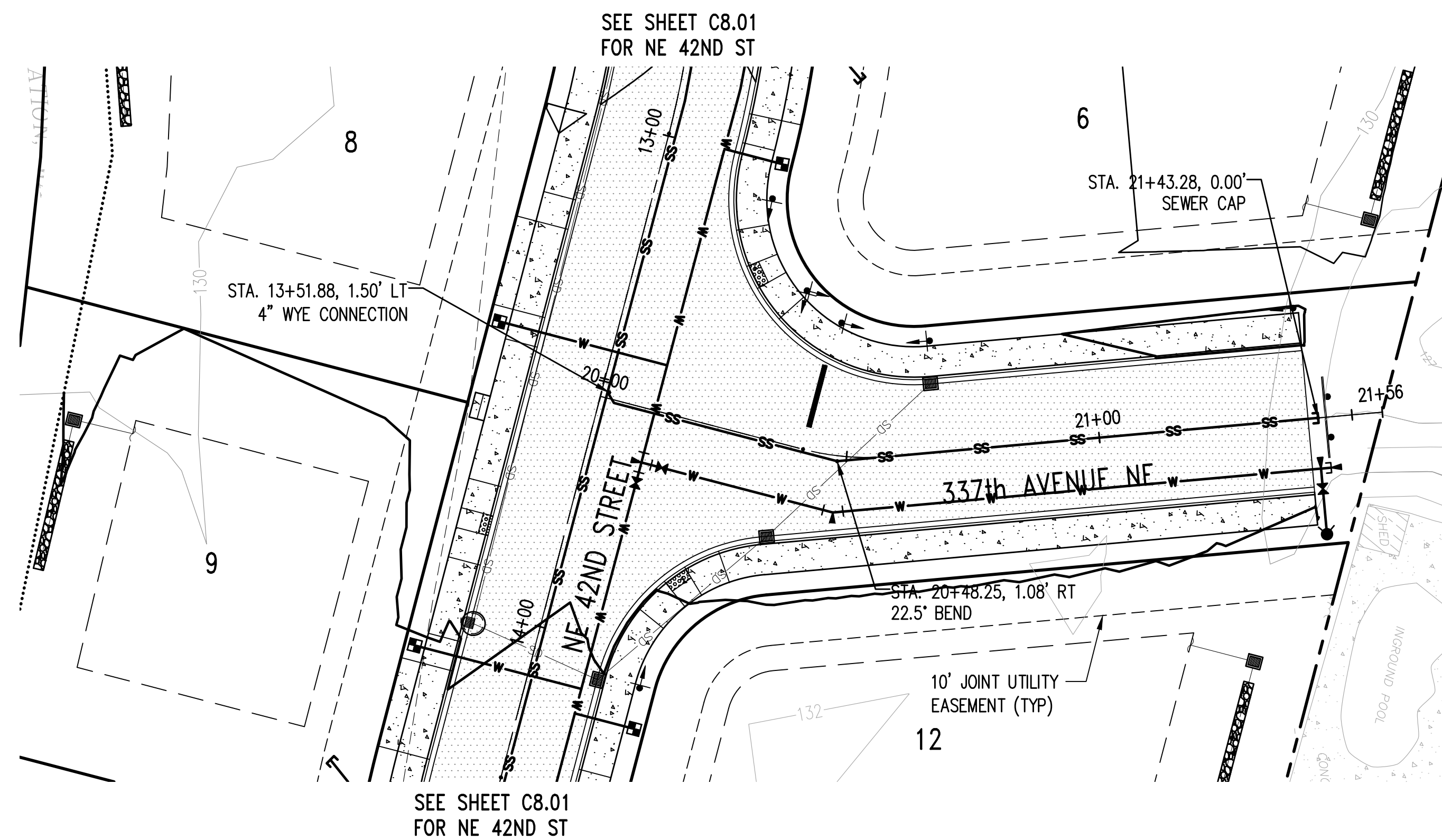
SEWER NOTES:

1. ALL NEW VACUUM SEWER MAINS SHALL BE PVC SCH40 OR SDR21 AND SHALL CONFORM TO SECTION 8 OF THE CITY OF CARNATION (COC) COMBINED WATER AND SANITARY SEWER UTILITY TECHNICAL STANDARDS (CWSSUTS).
2. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH COC CWSSUTS.
3. VALVE PIT AND SANITARY SIDE SEWERS SHALL BE PER COC SEWER STANDARD DETAIL S-5, S-6, S-9 AND S-10. VALVE PIT LIDS SHALL BE TRAFFIC RATED H20.
4. ALL NEW SANITARY SIDE SEWERS SHALL BE PVC SDR35 OR SDR21.
5. VACUUM SEWER MAINS LARGER THAN 4-INCHES SHALL HAVE A MINIMUM COVER OF 4- FEET.
6. CONTRACTOR SHALL POTHOLE AND VERIFY DEPTH OF EXISTING VACUUM SEWER MAIN A MINIMUM OF 5 DAYS PRIOR TO SCHEDULED CONNECTION OF VACUUM SEWER BRANCH.



LEGEND

- WATER MAIN
- WATER METER
- FIRE HYDRANT
- SANITARY SEWER MAIN (SS)
- SIDE SEWER STUB
- VALVE PIT
- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE/ROW LINE
- CENTERLINE
- BUILDING SET BACK LINE
- EASEMENT LINE
- WETLAND BUFFER LINE
- CHANNEL MIGRATION ZONE (CMZ)
- OHWM (TRIBUTARY SIDE CHANNEL)
- SHORELINE JURISDICTION
- SHORELINE BUFFER
- FEMA FLOODWAY (100 YR FLOOD PLAIN)



Z:\2000001-2009999\2000639_Tolt Place\CAD\Design\CD-CITY\CD_C8.00_SS_PP.dwg

Jun 06, 2023 - 9:22am RossC

NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD	DESIGNED BY WTJ
CHECKED BY WTJ	APPROVED BY JSF
DATE 12/22/2022	
J O B No. :2000639	

CALL TWO BUSINESS DAYS BEFORE YOU DIG 1-800-424-5555

SCALE:
AS NOTED

kpff
1601 5th Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
www.kpff.com

TOLT PLACE
CARNATION, WASHINGTON

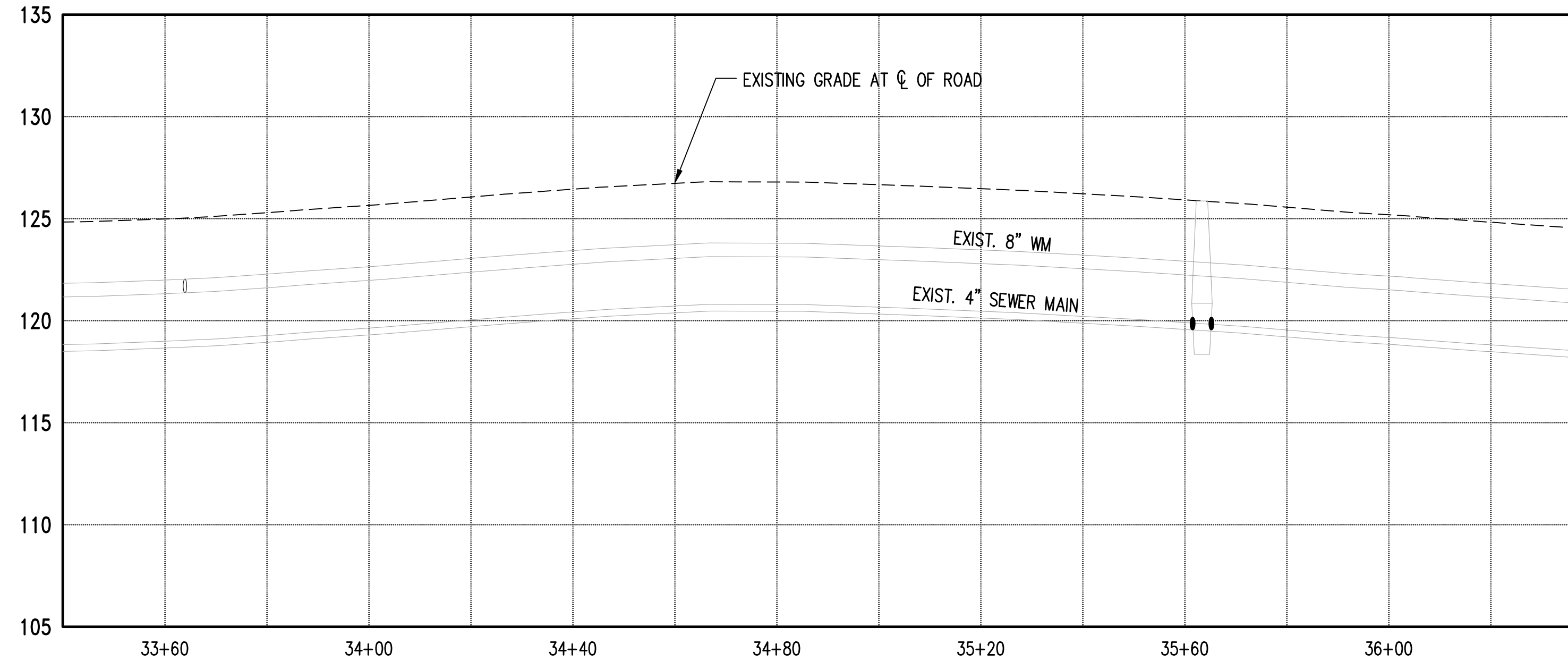
337TH AVENUE NE SEWER PLAN AND PROFILE

SHEET
C8.02

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.

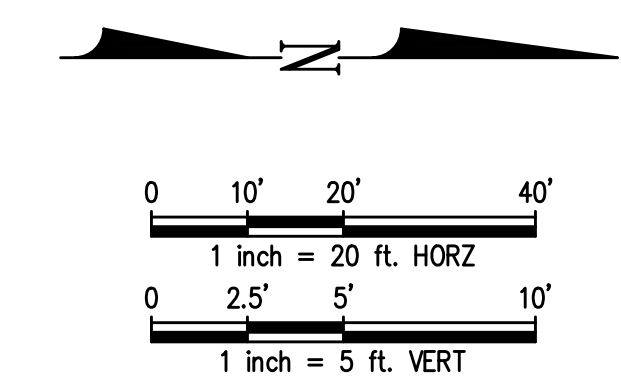
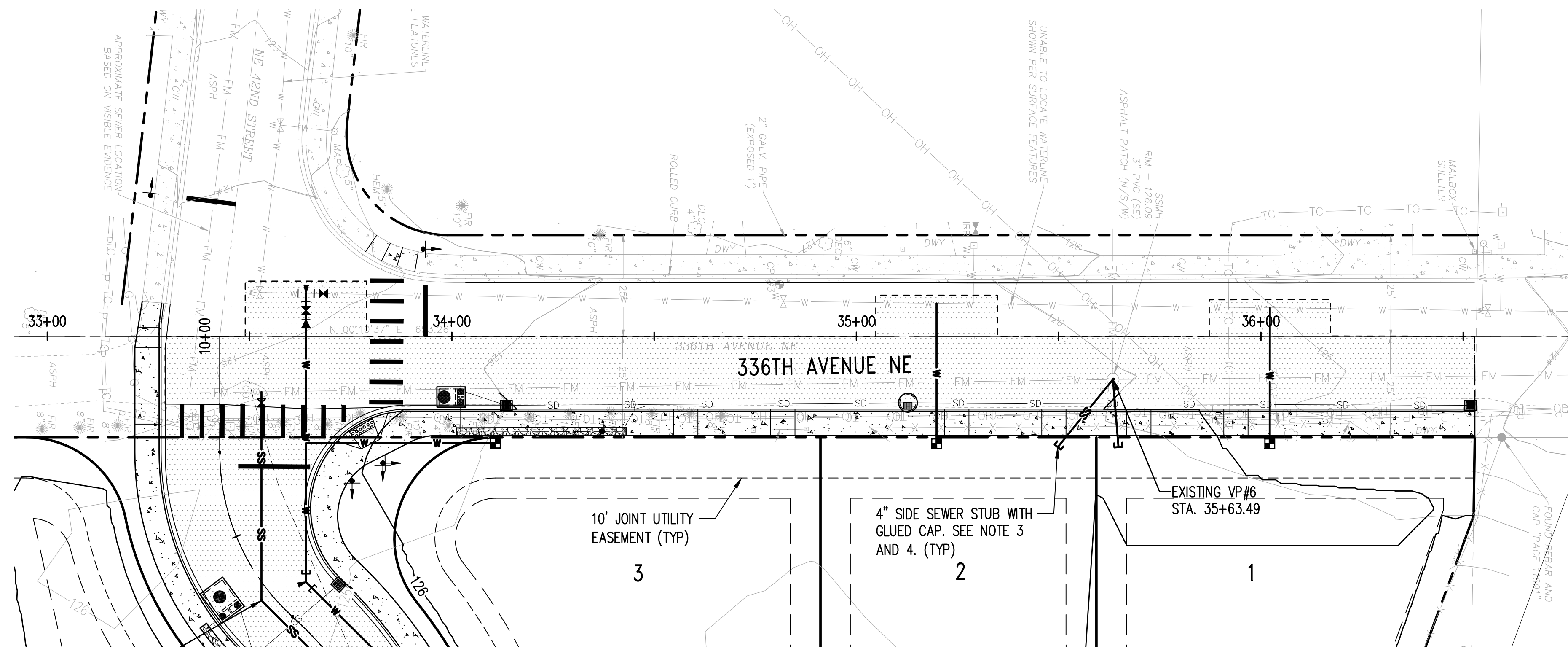
SEWER NOTES:

1. ALL NEW VACUUM SEWER MAINS SHALL BE PVC SCH40 OR SDR21 AND SHALL CONFORM TO SECTION 8 OF THE CITY OF CARNATION (COC) COMBINED WATER AND SANITARY SEWER UTILITY TECHNICAL STANDARDS (CWSSUTS).
2. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH COC CWSSUTS.
3. VALVE PIT AND SANITARY SIDE SEWERS SHALL BE PER COC SEWER STANDARD DETAIL S-5, S-6, S-9 AND S-10. VALVE PIT LIDS SHALL BE TRAFFIC RATED H20.
4. ALL NEW SANITARY SIDE SEWERS SHALL BE PVC SDR35 OR SDR21.
5. VACUUM SEWER MAINS LARGER THAN 4-INCHES SHALL HAVE A MINIMUM COVER OF 4- FEET.
6. CONTRACTOR SHALL POTHOLE AND VERIFY DEPTH OF EXISTING VACUUM SEWER MAIN A MINIMUM OF 5 DAYS PRIOR TO SCHEDULED CONNECTION OF VACUUM SEWER BRANCH.



LEGEND

- W — WATER MAIN
- WATER METER
- FIRE HYDRANT
- SS — SANITARY SEWER MAIN (SS)
- SS — SIDE SEWER STUB
- VALVE PIT
- - - - - EXISTING PROPERTY LINE
- — — — — PROPOSED PROPERTY LINE/ROW LINE
- - - - - CENTERLINE
- - - - - BUILDING SET BACK LINE
- - - - - EASEMENT LINE
- · - · - · - WETLAND BUFFER LINE
- - - - - CHANNEL MIGRATION ZONE (CMZ)
- - - - - OHWM (TRIBUTARY SIDE CHANNEL)
- · - · - · - SHORELINE JURISDICTION
- · - · - · - SHORELINE BUFFER
- - - - - FEMA FLOODWAY (100 YR FLOOD PLAIN)



Jun 06, 2023 - 9:22am
 RossC
 Z:\2000001-2009999\2000639_Tolt Place\CAD\Design\CD-CITY\CD_C8.03_SS_PP.dwg

NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD
 DESIGNED BY WTJ
 CHECKED BY WTJ
 APPROVED BY JSF
 DATE 12/22/2022
 J O B No. :2000639

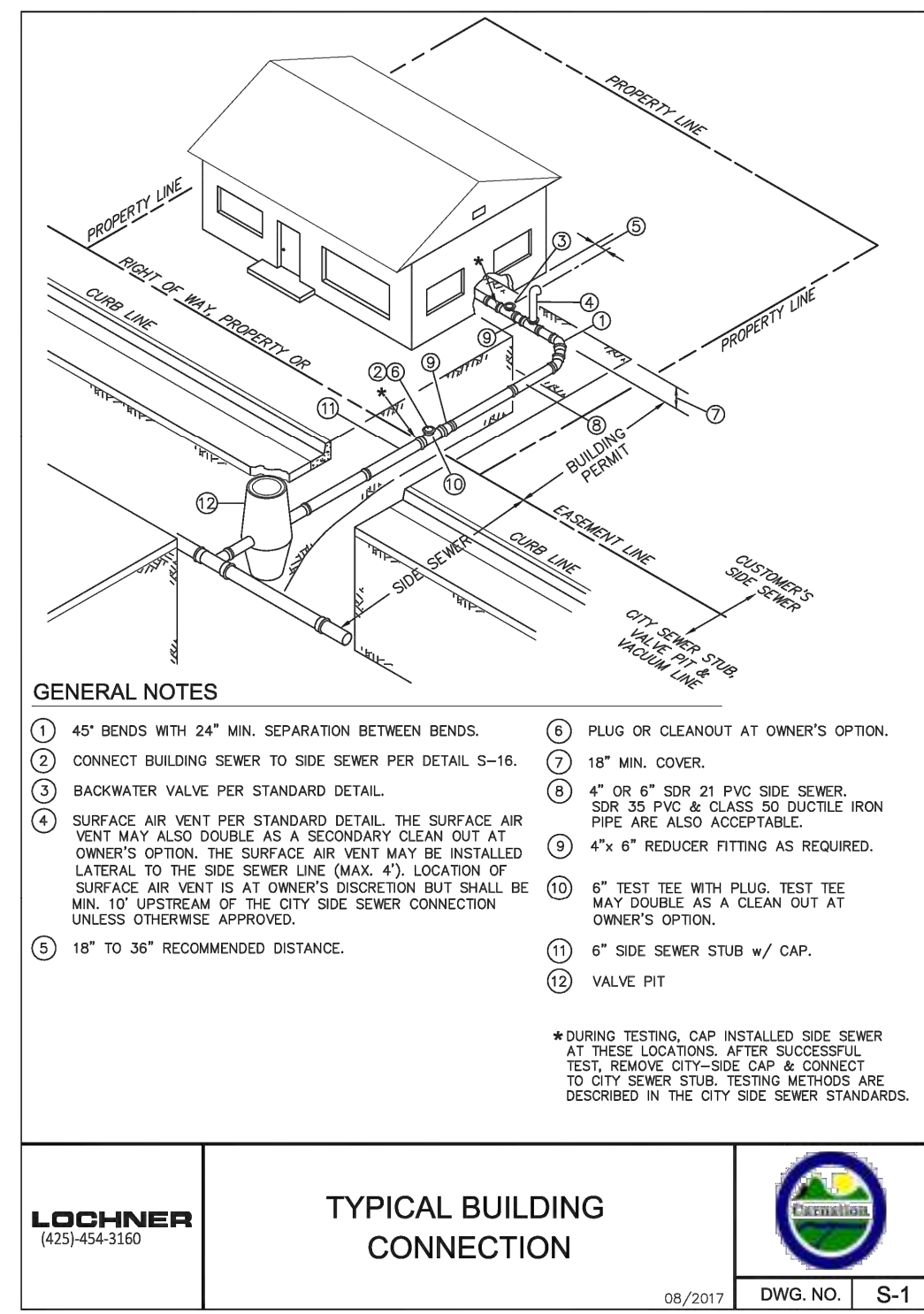
CALL TWO BUSINESS DAYS BEFORE YOU DIG 1-800-424-5555
 SCALE: AS NOTED



TOLT PLACE
 CARNATION, WASHINGTON
 336TH AVENUE NE SEWER PLAN AND PROFILE

SHEET
 C8.03

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.



- GENERAL NOTES**
- 45° BENDS WITH 24" MIN. SEPARATION BETWEEN BENDS.
 - CONNECT BUILDING SEWER TO SIDE SEWER PER DETAIL S-16.
 - BACKWATER VALVE PER STANDARD DETAIL.
 - SURFACE AIR VENT PER STANDARD DETAIL. THE SURFACE AIR VENT MAY ALSO DOUBLE AS A SECONDARY CLEAN OUT AT OWNER'S OPTION. THE SURFACE AIR VENT MAY BE INSTALLED LATERAL TO THE SIDE SEWER LINE (MAX 4'). LOCATION OF SURFACE AIR VENT IS AT OWNER'S DISCRETION BUT SHALL BE MIN. 10' UPSTREAM OF THE CITY SIDE SEWER CONNECTION UNLESS OTHERWISE APPROVED.
 - 18" TO 36" RECOMMENDED DISTANCE.
 - PLUG OR CLEANOUT AT OWNER'S OPTION.
 - 18" MIN. COVER.
 - 4" OR 6" SDR 21 PVC SIDE SEWER. SDR 35 PVC & CLASS 50 DUCTILE IRON PIPE ARE ALSO ACCEPTABLE.
 - 4"x 6" REDUCER FITTING AS REQUIRED.
 - 6" TEST TEE WITH PLUG. TEST TEE MAY DOUBLE AS A CLEAN OUT AT OWNER'S OPTION.
 - 6" SIDE SEWER STUB W/ CAP.
 - VALVE PIT
- *DURING TESTING, CAP INSTALLED SIDE SEWER AT THESE LOCATIONS. AFTER SUCCESSFUL TEST, REMOVE CITY-SIDE CAP & CONNECT TO CITY SEWER STUB. TESTING METHODS ARE DESCRIBED IN THE CITY SIDE SEWER STANDARDS.

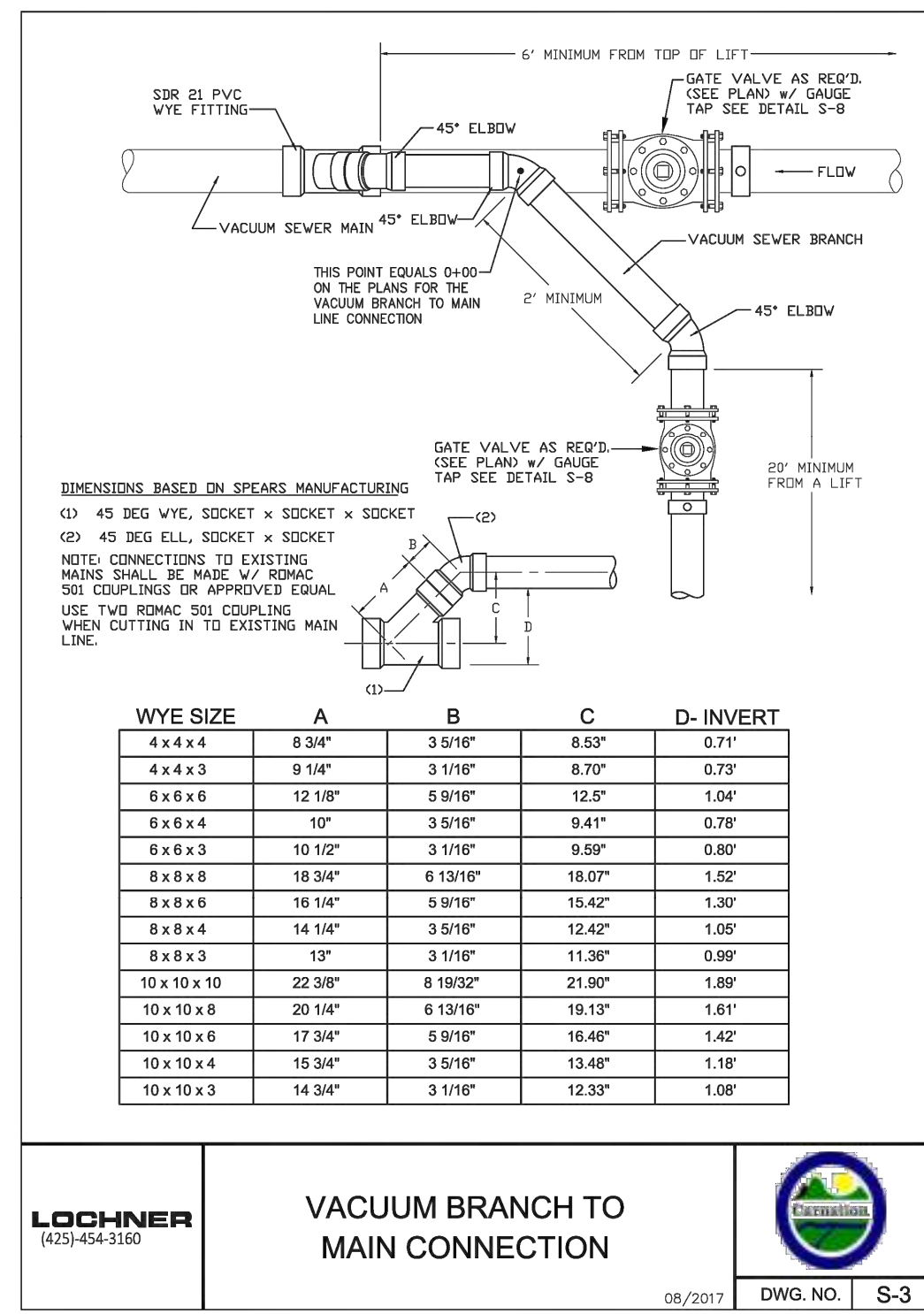
LOCHNER (425) 454-3160

TYPICAL BUILDING CONNECTION

08/2017 DWG. NO. S-1

TYPICAL BUILDING CONNECTION
CITY OF CARNATION STD PLAN S-1

1
C8.00-C8.03



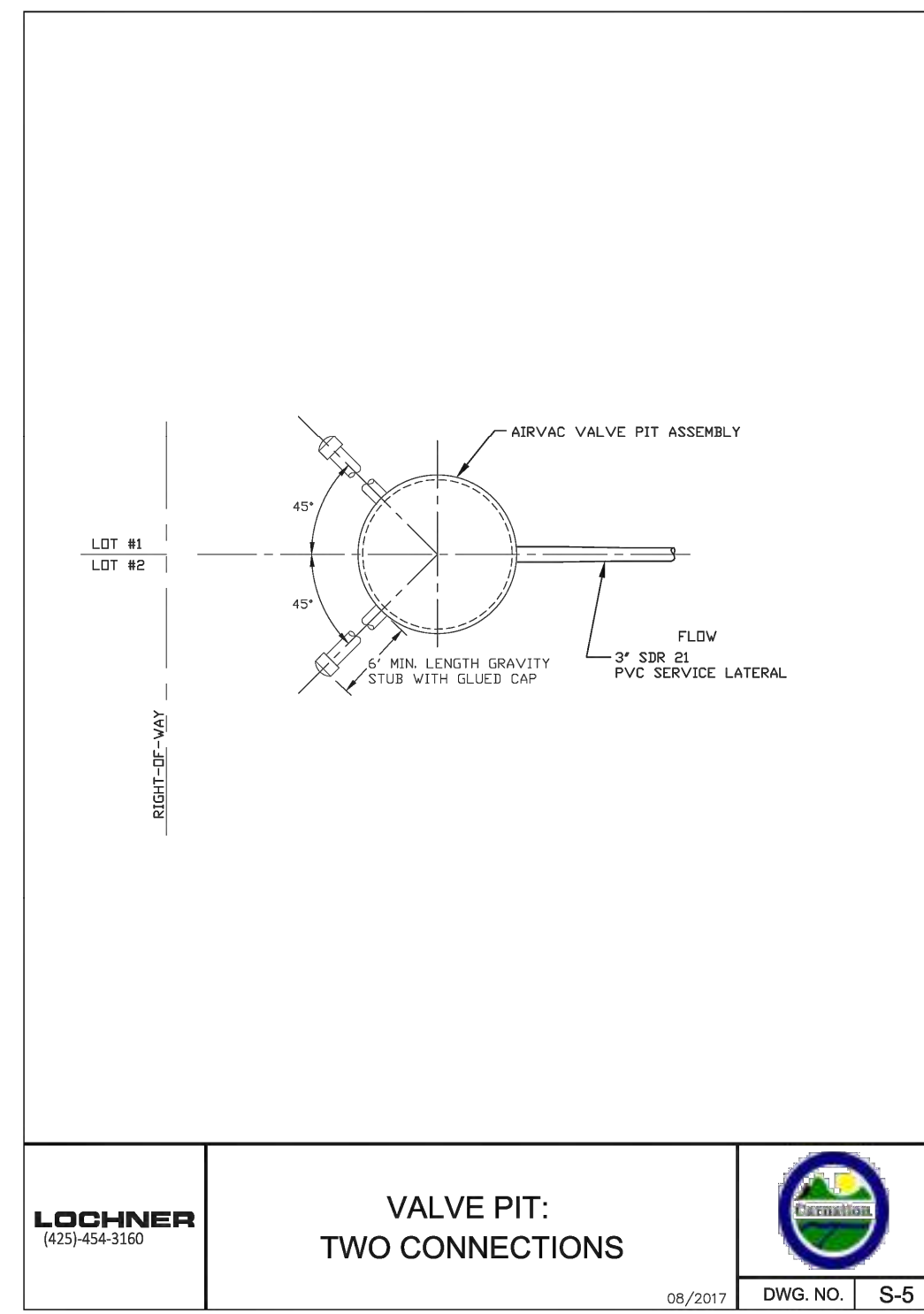
LOCHNER (425) 454-3160

VACUUM BRANCH TO MAIN CONNECTION

08/2017 DWG. NO. S-3

VACUUM BRANCH TO MAIN CONNECTION
CITY OF CARNATION STD PLAN S-3

2
C8.00-C8.03



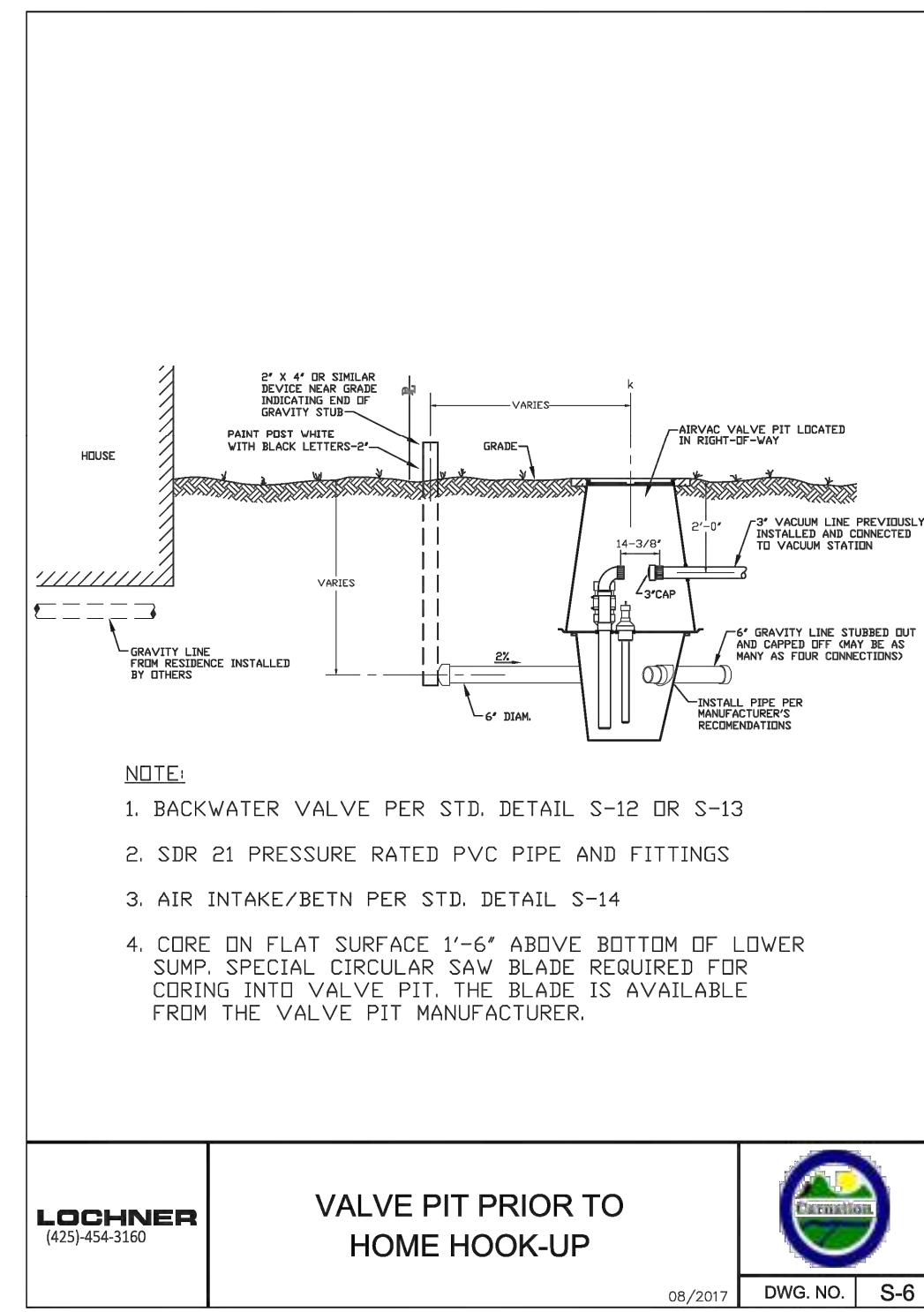
LOCHNER (425) 454-3160

VALVE PIT: TWO CONNECTIONS

08/2017 DWG. NO. S-5

VALVE PIT: TWO CONNECTIONS
CITY OF CARNATION STD PLAN S-5

3
C8.00-C8.03



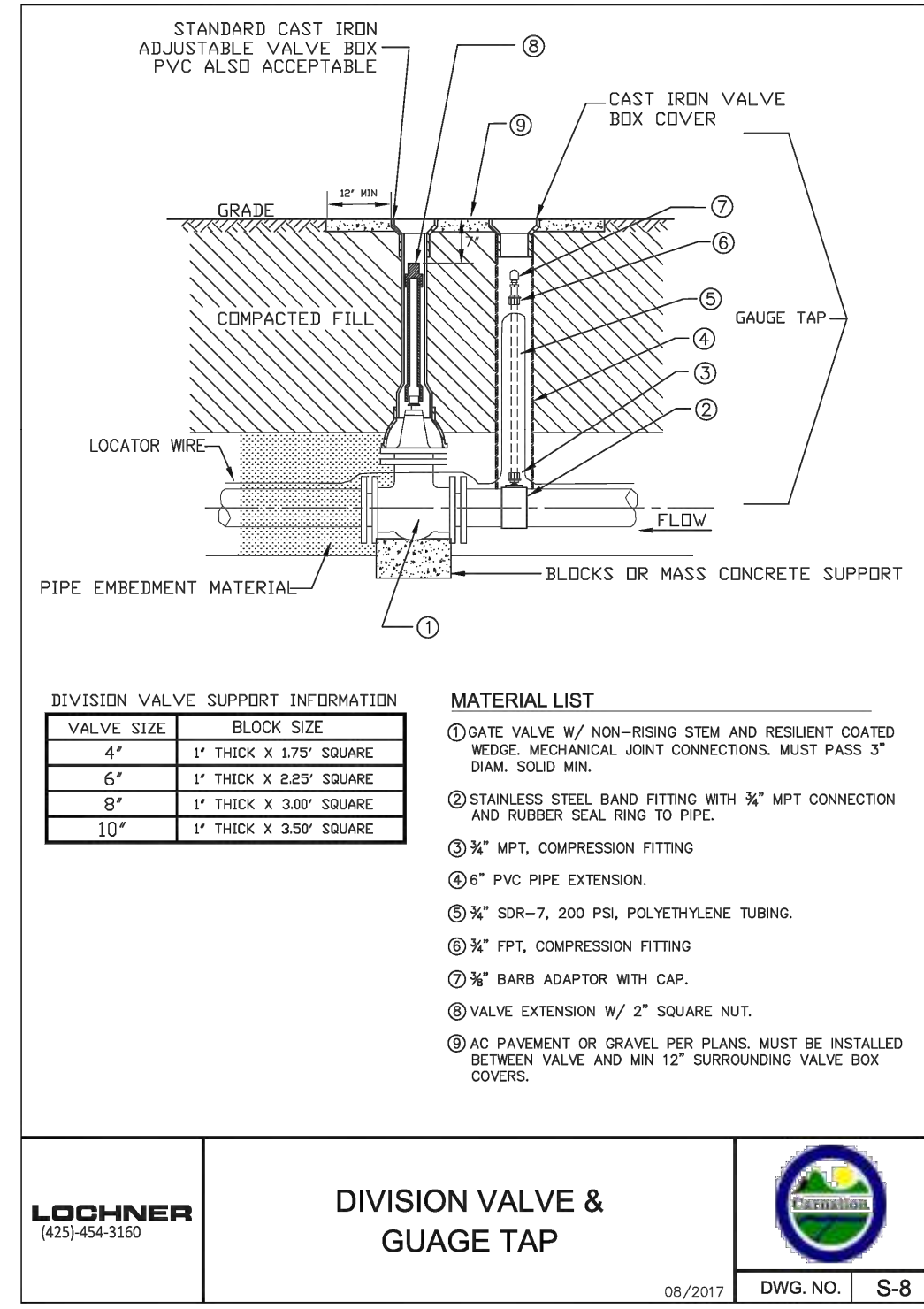
LOCHNER (425) 454-3160

VALVE PIT PRIOR TO HOME HOOK-UP

08/2017 DWG. NO. S-6

VALVE PIT PRIOR TO HOME HOOK-UP
CITY OF CARNATION STD PLAN S-6

4
C8.00-C8.03



- DIVISION VALVE SUPPORT INFORMATION**
- | VALVE SIZE | BLOCK SIZE |
|------------|-------------------------|
| 4" | 1" THICK X 1.75" SQUARE |
| 6" | 1" THICK X 2.25" SQUARE |
| 8" | 1" THICK X 3.00" SQUARE |
| 10" | 1" THICK X 3.50" SQUARE |
- MATERIAL LIST**
- GATE VALVE W/ NON-RISING STEM AND RESILIENT COATED WEDGE. MECHANICAL JOINT CONNECTIONS. MUST PASS 3" DIAM. SOLID MIN.
 - STAINLESS STEEL BAND FITTING WITH 3/4" MPT CONNECTION AND RUBBER SEAL RING TO PIPE.
 - 3/4" MPT, COMPRESSION FITTING
 - 6" PVC PIPE EXTENSION.
 - 3/4" SDR-7, 200 PSI, POLYETHYLENE TUBING.
 - 3/4" FPT, COMPRESSION FITTING
 - 3/4" BARB ADAPTOR WITH CAP.
 - VALVE EXTENSION W/ 2" SQUARE NUT.
 - AC PAVEMENT OR GRAVEL PER PLANS. MUST BE INSTALLED BETWEEN VALVE AND MIN 12" SURROUNDING VALVE BOX COVERS.

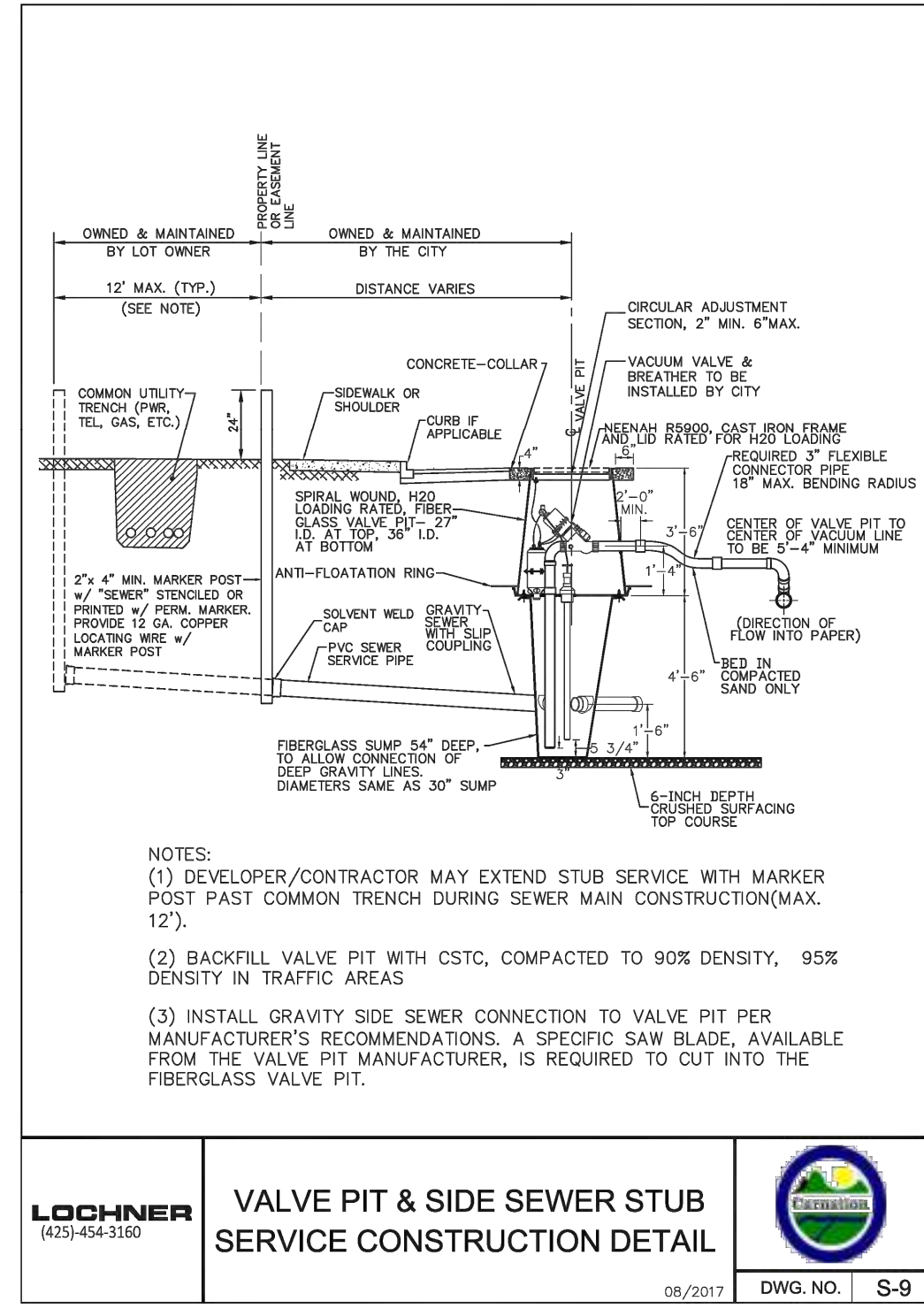
LOCHNER (425) 454-3160

DIVISION VALVE & GAUGE TAP

08/2017 DWG. NO. S-8

DIVISION VALVE & GAUGE TAP
CITY OF CARNATION STD PLAN S-8

5
C8.00-C8.03



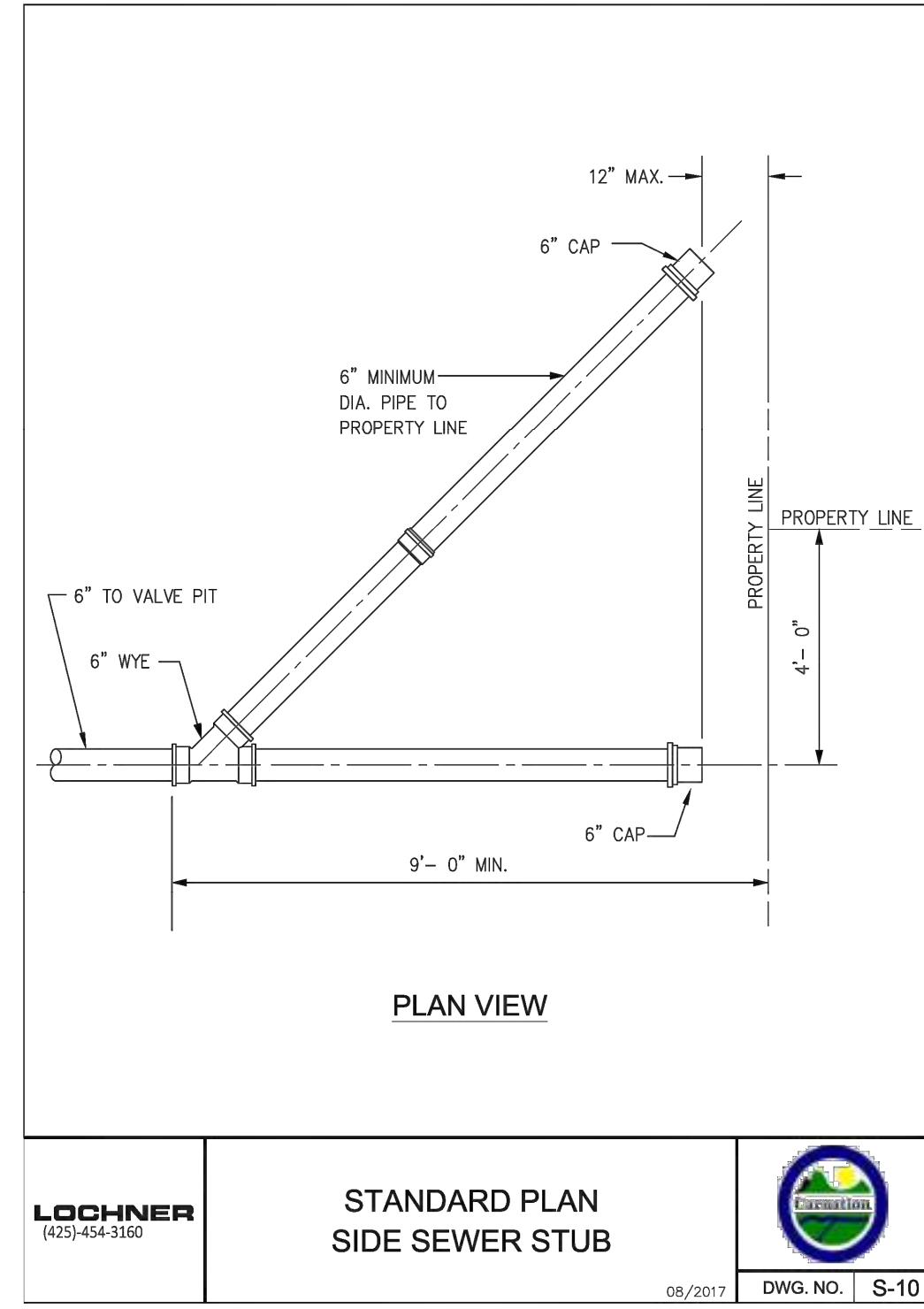
LOCHNER (425) 454-3160

VALVE PIT & SIDE SEWER STUB SERVICE CONSTRUCTION DETAIL

08/2017 DWG. NO. S-9

VALVE PIT & SIDE SEWER STUB SERVICE CONSTRUCTION DETAIL
CITY OF CARNATION STD PLAN S-9

6
C8.00-C8.03



LOCHNER (425) 454-3160

STANDARD PLAN SIDE SEWER STUB

08/2017 DWG. NO. S-10

STANDARD PLAN SIDE SEWER STUB
CITY OF CARNATION STD PLAN S-10

7
C8.00-C8.03

Z:\2000001-2009999\2000639_Tolt Place\CAD\Design\CD-CITY\CD_C8.10_SEWER_DTL.dwg
Jun 06, 2023 - 9:22am
RossC

NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD
CHECKED BY WTJ
DESIGNED BY WTJ
APPROVED BY JSF
DATE 12/22/2022
J O B No. :2000639

CALL TWO BUSINESS DAYS BEFORE YOU DIG 1-800-424-5555
SCALE: AS NOTED

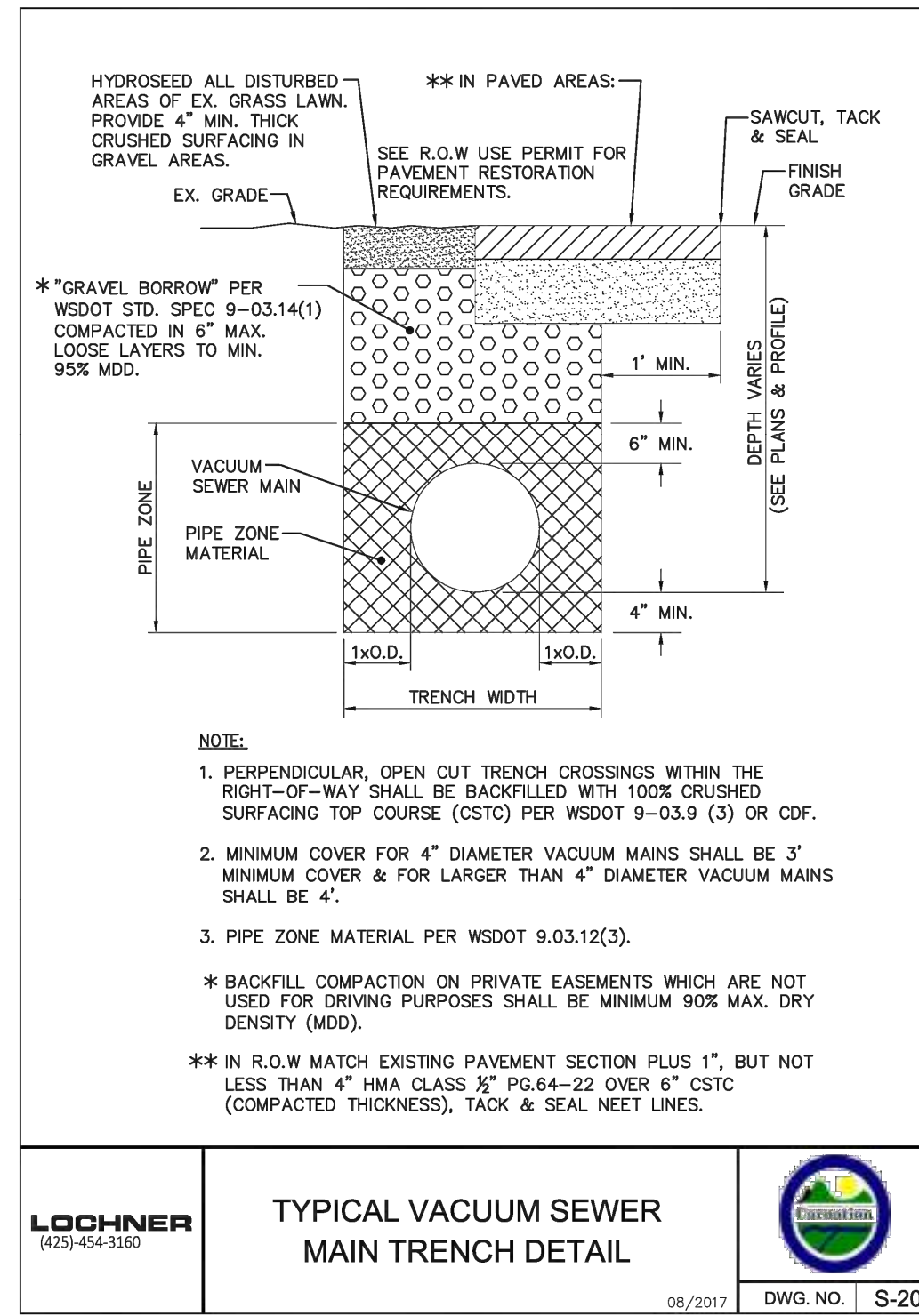


1601 5th Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
www.kpff.com



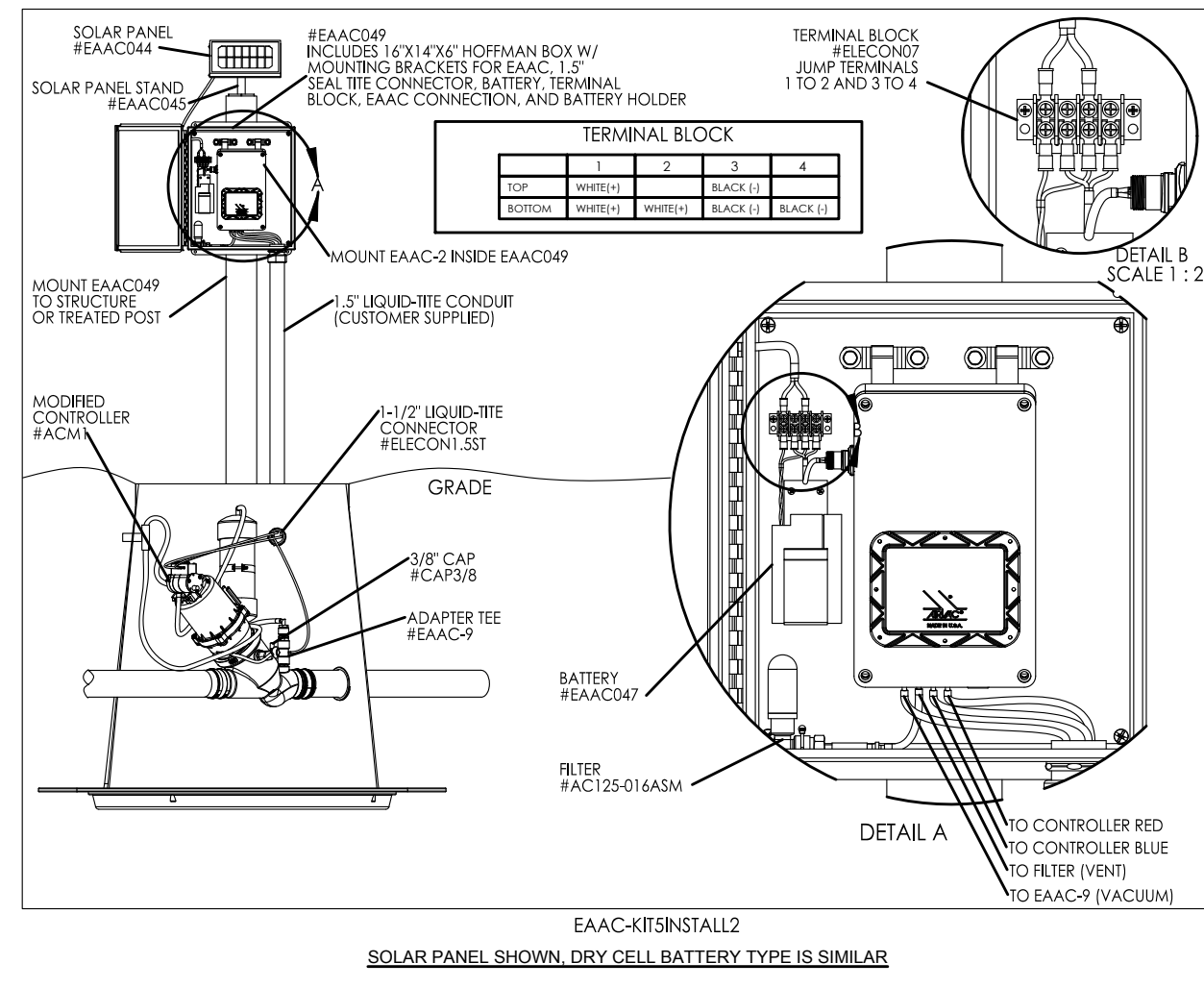
TOLT PLACE
CARNATION, WASHINGTON
SEWER DETAILS
SHEET
C8.10

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.



TYPICAL VACUUM SEWER MAIN TRENCH DETAIL
CITY OF CARNATION STD PLAN S-20

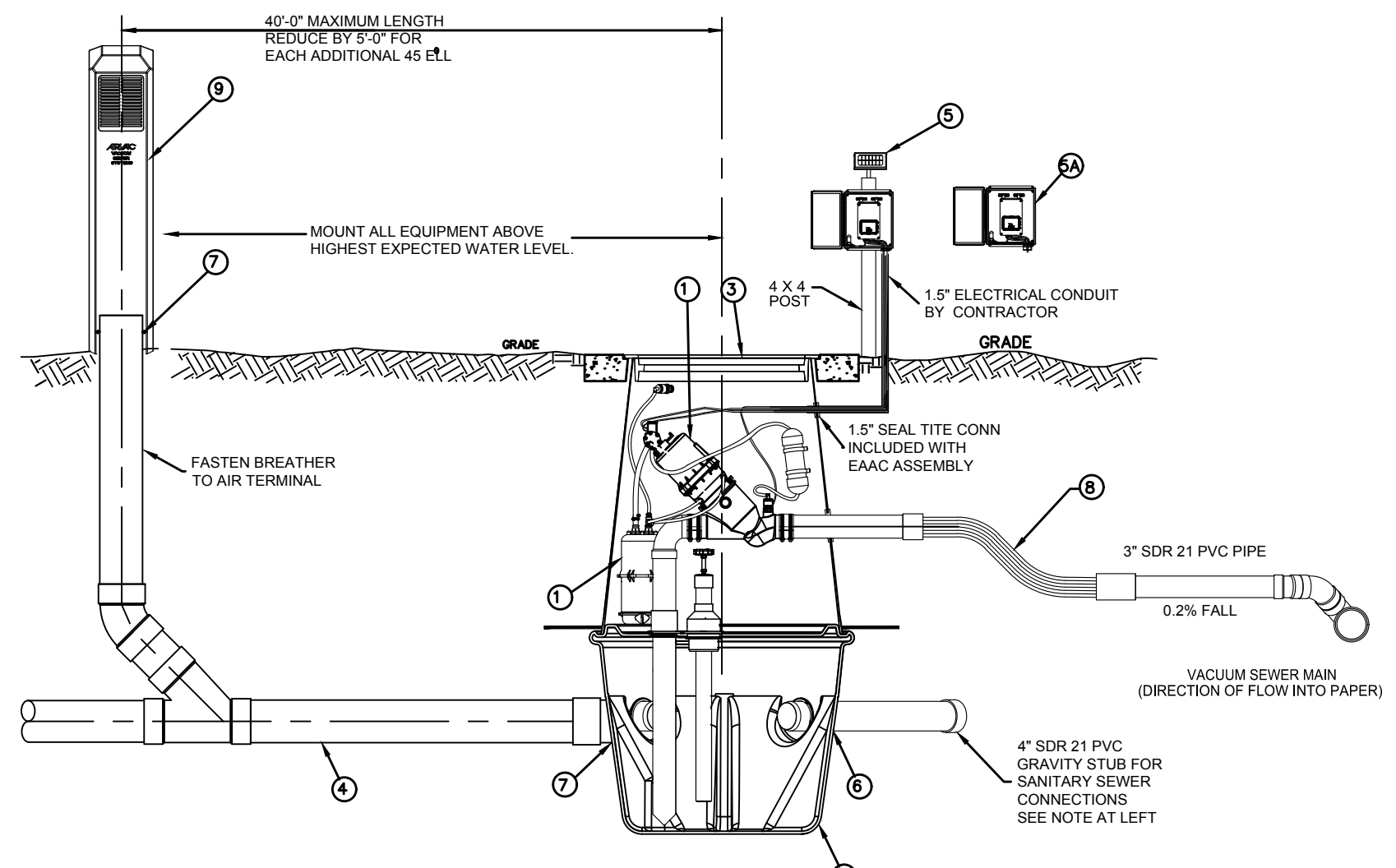
8
C8.00-C8.03



1. CONTACT AIRVAC FOR INFORMATION ON EAAC TUBING CONNECTORS.
2. THE AIRVAC VALVE MUST BE SPECIFIED FOR EAAC USE WHEN ORDERING. REQUIRED VOLUME COMPONENTS WITH TUBE ADAPTERS, AND TUBING WILL THEN BE PROVIDED.
3. 8" OR 4" LINE ROUTED TO VACUUM VALVE PIT USING SCH 40 OR SDR 21 PVC PIPE. PIPE TO BE INSTALLED WITH PROPER SLOPE (MIN. 0.2%) AND BEDDING TO PREVENT POCKETS OR BELLES.
4. SEE OTHER DETAILS FOR VALVE PIT DESCRIPTIONS.
5. SOIL UNDER VALVE PIT TO BE CONSOLIDATED.
6. *NOTE: IN AREAS WITH A WINTER DESIGN DRY BULB TEMPERATURE BELOW 32° F USE MINIMUM 20FT SEPARATION.
7. WHEN ORDERING AN EAAC UNIT, SPECIFY VPXX42EBAAC-4 FOR DRY CELL BATTERY POWER OR VPXX42EBAAC-5 FOR SOLAR POWER. ORDER VPXX42EBAAC PIT FOR DEDICATED TYPE SHOWN. ORDER SELECTED OPTIONAL EQUIPMENT AS SHOWN.
8. ALL OTHER ITEMS LABELED "AIRVAC" WILL BE INCLUDED.

- VALVE PIT OPTIONS**
- STANDARD AIRVAC VALVE PIT MODELS**
- VP4830P1 1 PCE MOLDED PE 6'-6"
 - VP3624H 2 PCE HYBRID 6'-0"
 - VP542H 2 PCE HYBRID 8'-0"
 - VP7842H 2 PCE HYBRID 10'-0"
 - VP3042P2 2 PCE PE 6'-0"
 - VP542P2 2 PCE PE 8'-0"
 - VP7842P2 2 PCE PE 10'-0"

#	DESCRIPTION	AIRVAC PART#	QTY	MFG/SUPPLIER
1.	VALVE/ BREATHER "E" FOR EAAC-KITS	VPXX42EBAAC-5 (OR -4)	1	AIRVAC
2.	AIRVAC STANDARD VALVE PIT, MAY BE FIBERGLASS OR ONE PIECE MOLDED PE	SEE OPTIONS THIS PAGE	1	AIRVAC
3.	AIRVAC TRAFFIC RATED FRAME AND COVER	CIGLID, CIGFRAME	1	AIRVAC
4.	4" OR 6" SDR 21 PRESSURE RATED PVC PIPE AND FITTINGS		2	CONTRACTOR
5.	AIRVAC ELECTRONIC AIR ADMISSION CONTROL (EAAC) WITH SOLAR PANEL	INCL. W/VPXX42EBAAC-5	1	CONTRACTOR
5A.	AIRVAC ELECTRONIC AIR ADMISSION CONTROL (EAAC) WITH BATTERY PACK	INCL. W/VPXX42EBAAC-4	1	CONTRACTOR
6.	4" PIPE GROMMET (ORDER AS SEPARATE ITEM, ONE PER GRAVITY CONN)	GROM4B	1	AIRVAC
7.	6" PIPE GROMMET (ORDER AS SEPARATE ITEM, ONE PER GRAVITY CONN)	GROM6B	1	AIRVAC
8.	AIRVAC OPTIONAL 3" FLEXIBLE CONNECTOR (ORDER AS SEPARATE ITEM)	VPFLXHOSE	1	AIRVAC
9.	AIRVAC ONE PIECE MOLDED AIR TERMINAL (ORDER AS SEPARATE ITEM)	AT1000-4 UTILITY GREEN	1	AIRVAC



NON DEDICATED EAAC (HYBRID VALVE PIT)
AIRVAC VACUUM TECHNOLOGY SYSTEMS

9
C8.01

Z:\2000001-2009999\2000639_Tolt Place\CAD\Design\CD-CITY\CD_C8.10_SEWER_DTL.dwg Jun 06, 2023 - 9:22am RossC

NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD	DESIGNED BY WTJ
CHECKED BY WTJ	APPROVED BY JSF
DATE 12/22/2022	
J O B No. :2000639	

CALL TWO BUSINESS DAYS BEFORE YOU DIG 1-800-424-5555

SCALE: AS NOTED

kpff

1601 5th Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
www.kpff.com

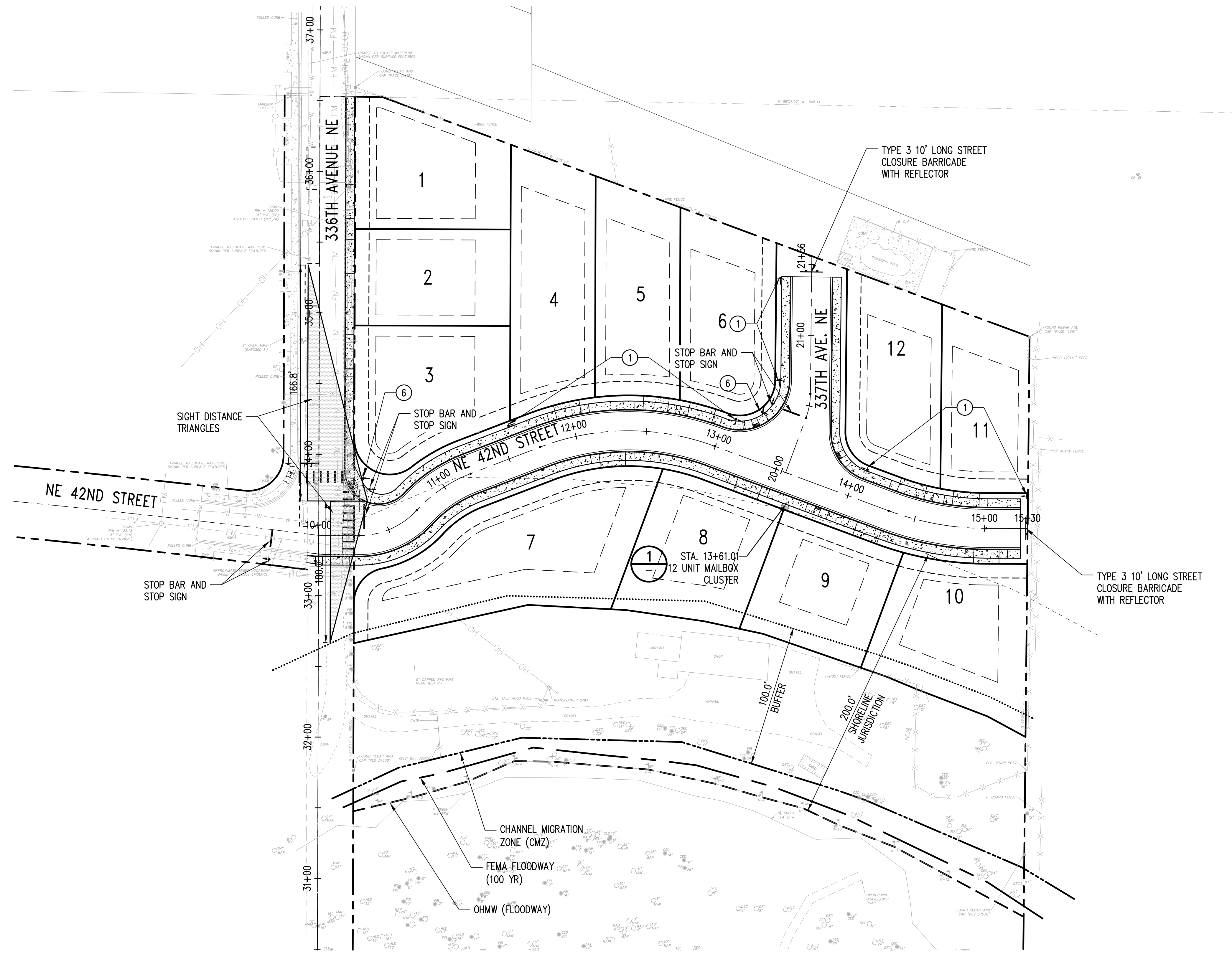
06/06/2023

TOLT PLACE
CARNATION, WASHINGTON

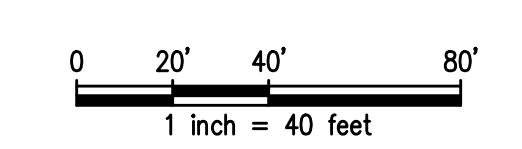
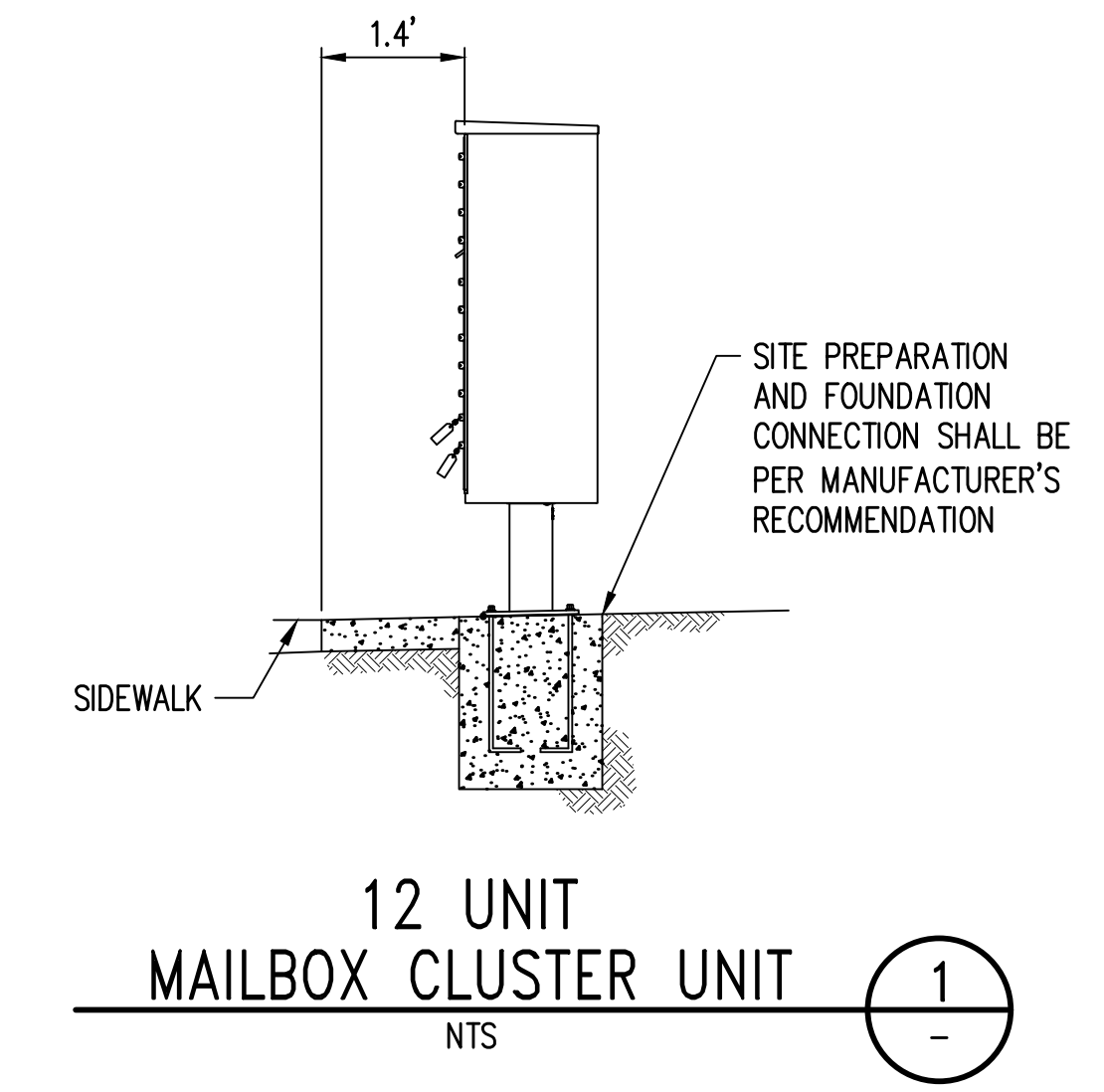
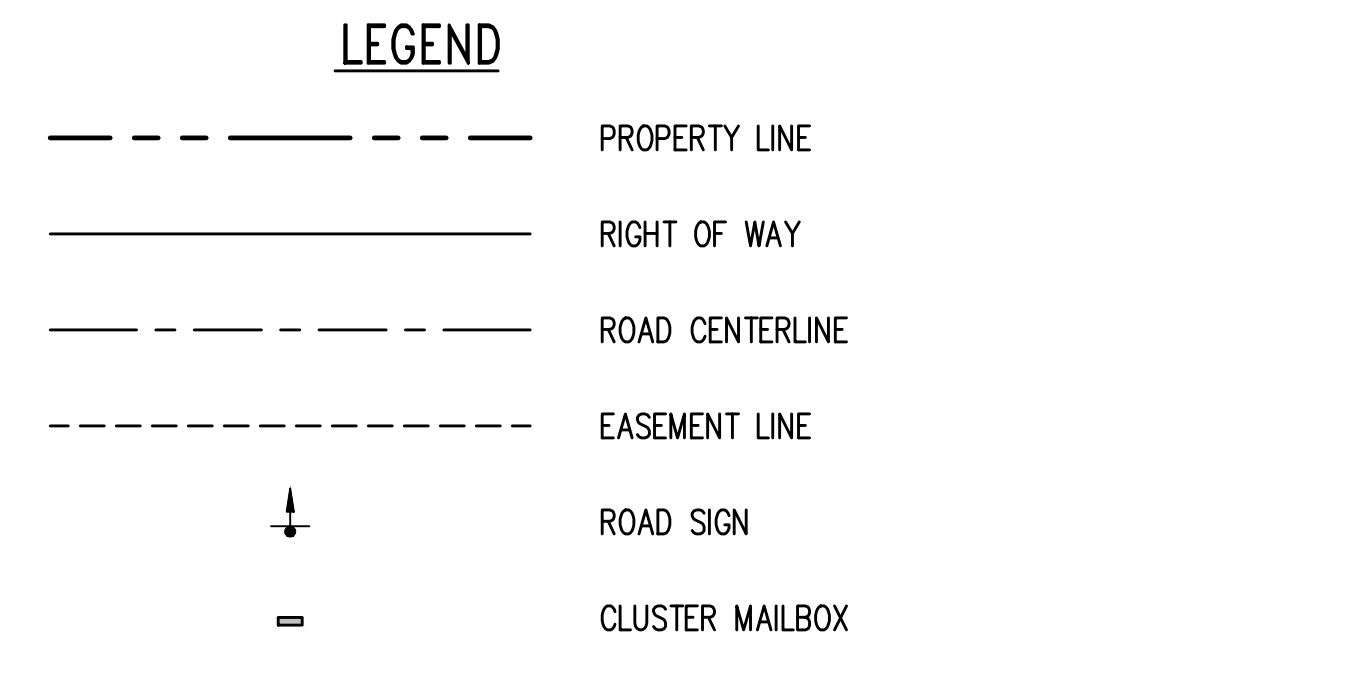
SEWER DETAILS

SHEET
C8.20

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.



- UTILITY NOTES:**
1. INSTALL "NO PARKING" SIGN PER WSDOT SIGN FABRICATION MANUAL R8-3 AND WSDOT STD PLAN G-20.10-02. FIELD LOCATE AND COORDINATE FINAL LOCATION WITH OWNER
 2. SIGNS POSTS AND ANCHOR SHALL BE TYPE ST-3 PER WSDOT STD PLAN G-24.50-04.
 3. MAILBOX UNITS SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.
 4. STATION GIVEN FOR MAILBOX CLUSTER LOCATION IS TO CENTER OF UNITS.
 5. MAILBOX LOCATION SHALL BE APPROVED BY CITY OF CARNATION POSTMASTER. PROVIDE POSTMASTER'S APPROVAL TO CITY OF CARNATION PUBLIC WORKS WITH FINAL PLAN SET.
 6. STREET NAME SIGNS WILL BE PROVIDED AT ALL INTERSECTIONS.



Jun 06, 2023 - 9:22am
 RossC
 Z:\2000001-2009999\2000639_Tolt Place\CAD\Design\CD-071\CD_C9.00_CHAN.kwg

NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD
 DESIGNED BY WTJ
 CHECKED BY WTJ
 APPROVED BY JSF
 DATE 12/22/2022
 J O B No. :2000639

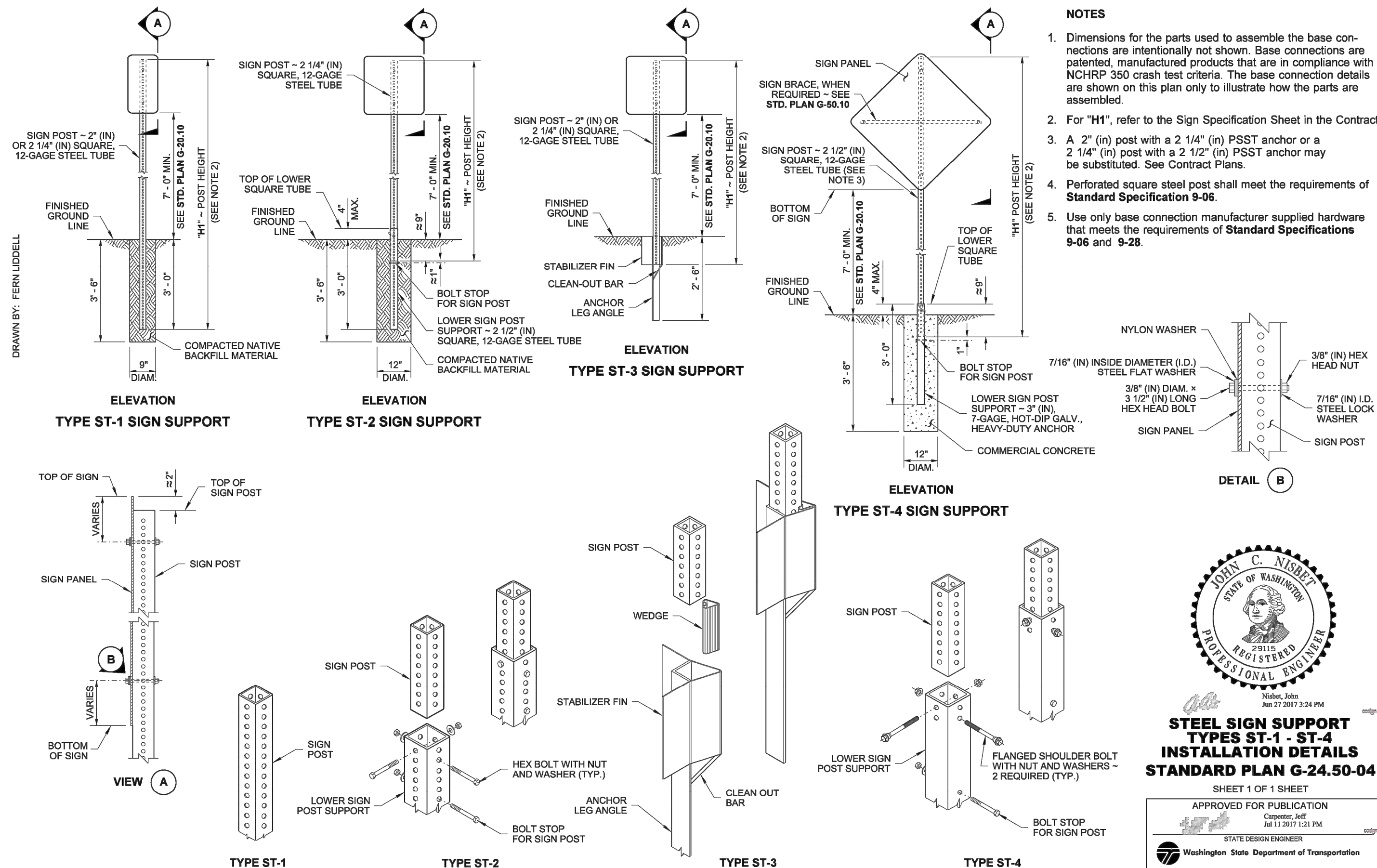
CALL TWO BUSINESS DAYS BEFORE YOU DIG 1-800-424-5555
 SCALE: AS NOTED



TOLT PLACE
 CARNATION, WASHINGTON
CHANNELIZATION AND SIGNAGE PLAN

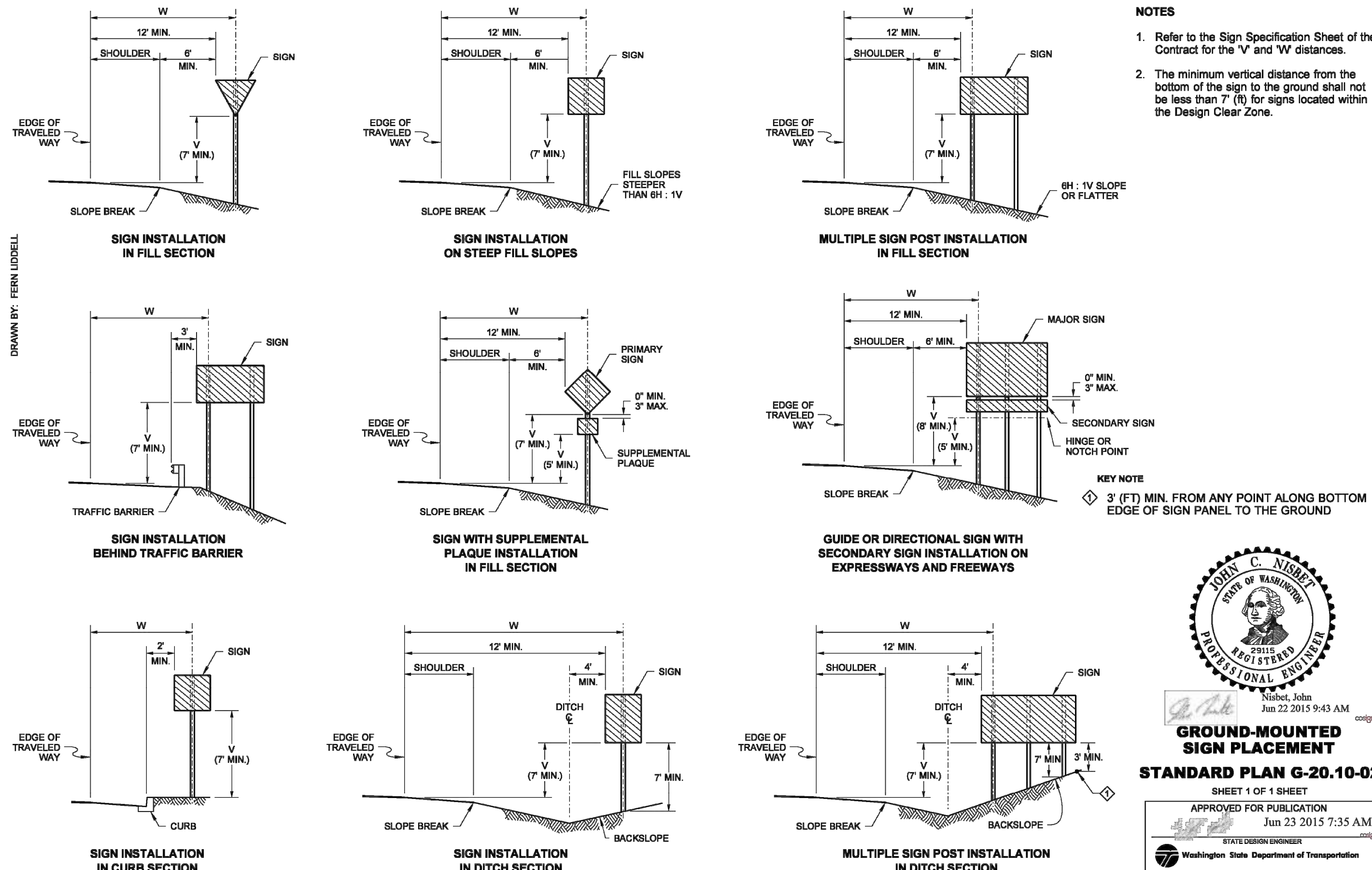
SHEET
C9.00

SECTION 15, TOWNSHIP 25 NORTH, RANGE 7 EAST, W.M.



- NOTES**
- Dimensions for the parts used to assemble the base connections are intentionally not shown. Base connections are patented, manufactured products that are in compliance with NCHRP 350 crash test criteria. The base connection details are shown on this plan only to illustrate how the parts are assembled.
 - For "H1", refer to the Sign Specification Sheet in the Contract.
 - A 2" (in) post with a 2 1/4" (in) PSST anchor or a 2 1/4" (in) post with a 2 1/2" (in) PSST anchor may be substituted. See Contract Plans.
 - Perforated square steel post shall meet the requirements of Standard Specification 9-06.
 - Use only base connection manufacturer supplied hardware that meets the requirements of Standard Specifications 9-06 and 9-28.

STEEL SIGN SUPPORT TYPES ST-1 - ST-4 INSTALLATION DETAILS
STANDARD PLAN G-24.50-04
 SHEET 1 OF 1 SHEET
 APPROVED FOR PUBLICATION
 Cooper, Jeff
 JUN 11 2017 1:23 PM
 STATE DESIGN ENGINEER
 Washington State Department of Transportation



- NOTES**
- Refer to the Sign Specification Sheet of the Contract for the "V" and "W" distances.
 - The minimum vertical distance from the bottom of the sign to the ground shall not be less than 7' (ft) for signs located within the Design Clear Zone.

KEY NOTE
 3' (FT) MIN. FROM ANY POINT ALONG BOTTOM EDGE OF SIGN PANEL TO THE GROUND

GROUND-MOUNTED SIGN PLACEMENT
STANDARD PLAN G-20.10-02
 SHEET 1 OF 1 SHEET
 APPROVED FOR PUBLICATION
 Jun 23 2015 7:35 AM
 STATE DESIGN ENGINEER
 Washington State Department of Transportation

STEEL SIGN SUPPORT TYPE ST-3
 WSDOT STD PLAN G 24.50-04
 1
 C9.00

GROUND-MOUNTED SIGN PLACEMENT
 WSDOT STD PLAN G 20.10-02
 2
 C9.00

Jun 06, 2023 - 9:22am
 RossC
 Z:\20000001-2009999\2000639_Toll_Place\CAD\Design\CD-CITY\CD_C9.00_CHAN.dwg

NO.	DATE	BY	CHD.	APPR.	REVISION
3	6/6/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
2	5/23/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS
1	4/17/23	RAG	WTJ	JSF	CITY OF CARNATION COMMENT REVISIONS

DRAWN BY TAD
 DESIGNED BY WTJ
 CHECKED BY WTJ
 APPROVED BY JSF
 DATE 12/22/2022
 J O B No. :2000639

CALL TWO BUSINESS DAYS BEFORE YOU DIG
 1-800-424-5555
 SCALE: AS NOTED



1601 5th Avenue, Suite 1600
 Seattle, WA 98101
 206.622.5822
 www.kpff.com



TOLT PLACE
 CARNATION, WASHINGTON
 CHANNELIZATION AND SIGNAGE DETAILS

SHEET
C9.10