

VICINITY MAP

31ST AVE SW

HWY 512

9TH ST SW

92ND AVE E

94TH AVE SW

7TH ST SW

112TH ST E

SOUTH HILL MALL

PROJECT LOCATION

S MERIDIAN

31ST AVE SE

35TH AVE SE

37TH AVE SE

N

N.T.S.

**NOTES:**

1. DIMENSIONS ARE TO FLOWLINE UNLESS OTHERWISE NOTED.
2. ANY REVISION TO THE APPROVED DRAWINGS SHALL BE REVIEWED AND APPROVED BY THE CITY UNDER A PLAN CHANGE REQUEST REGARDLESS OF IT BEING ONSITE OR OFFSITE. SEE CITY OF PUYALLUP ENGINEERING GENERAL NOTE 5 FOR MORE INFORMATION.
3. ALL ONSITE FENCES AND RETAINING WALL SECTIONS ~~SHALL BE~~ DESIGNED WITH MATERIALS AND COLORS COMPLEMENTARY TO THE SURROUNDING SOUTH HILL MALL DEVELOPMENT.

SHEET INDEX	
C-1	OVERALL SITE PLAN - ASBUILT
C-2	GENERAL NOTES - ASBUILT
C-2.1	GENERAL NOTES - ASBUILT
C-3	SURVEY OVERLAY & DEMOLITION PLAN - ASBUILT
C-4	SANITARY & WATER UTILITY PLAN - ASBUILT
C-4.1	STORM UTILITY PLAN - ASBUILT
C-4.2	UTILITY PLAN SCHEDULES - ASBUILT
C-5	OVERALL SITE GRADING PLAN - ASBUILT
C-5.1	SOUTHERN GRADING PLAN - ASBUILT
C-5.2	NORTHERN GRADING PLAN - ASBUILT
C-5.3	GRADING PLAN DETAILS - ASBUILT
C-6	EROSION & SEDIMENT CONTROL PLAN - ASBUILT
C-6.1	EROSION & SEDIMENT CONTROL PLAN DETAILS - ASBUILT
C-7	GENERAL DETAILS - ASBUILT
C-7.1	GENERAL DETAILS - ASBUILT
C-8	UTILITY DETAILS - ASBUILT
C-8.1	UTILITY DETAILS - ASBUILT
C-8.2	UTILITY DETAILS - ASBUILT
C-8.3	UTILITY DETAILS - ASBUILT
C-8.4	UTILITY DETAILS - ASBUILT
C-8.5	UTILITY DETAILS - ASBUILT
LP-1	PLANTING PLAN
LP-2	PLANTING SPECIFICATIONS AND DETAILS

**OWNER**  
HERITAGE INN & SUITES OF PUYALLUP, LLC  
4500 36TH AVE. S, SUITE 200  
FARGO, ND 58104  
PH: 701-293-4077  
JEFF@DAKOTALG.COM

**CIVIL ENGINEER**  
BARGHAUSEN CONSULTING  
ENGINEERS  
18215 72ND AVENUE SOUTH  
KENT, WA 98032  
PH: 425-251-6222  
DDAWES@BARGHAUSEN.COM

**CALL BEFORE YOU DIG**  
**ONE CALL - WASHINGTON**  
**1-800-424-5555 or 811**

<p>APPROVED _____</p> <p>BY _____</p> <p>CITY OF PUYALLUP ENGINEERING SERVICES</p> <p>DATE _____</p> <p>NOTE: THIS APPROVAL IS VOID AFTER 1 YEAR FROM APPROVAL DATE.</p> <p>THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS.</p> <p>FIELD CONDITIONS MAY DICTATE CHANGES TO THE PLANS AS DETERMINED BY THE ENGINEERING SERVICES MANAGER.</p>	<p>FIRE HYDRANT/FDC LOCATION/ACCESS APPROVED _____</p> <p>BY _____</p> <p>CITY OF PUYALLUP FIRE CODE OFFICIAL</p> <p>DATE _____</p> <p>NOTE: THIS APPROVAL IS VOID AFTER 1 YEAR FROM APPROVAL DATE.</p> <p>THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS.</p> <p>FIELD CONDITIONS MAY DICTATE CHANGES TO THE PLANS AS DETERMINED BY THE FIRE CODE OFFICIAL.</p>
--	---


HERITAGE INN & SUITES OF  
PUYALLUP, LLC  
4500 36TH AVE. S, SUITE 200  
FARGO, NE 58104



Scale:

Designed DC

**Barghausen  
Consulting Engineers, LLC.**  
18215 72nd Avenue South  
Kent, WA 98032  
**425.251.6222    [barghausen.com](http://barghausen.com)**



Job Number  
22507  
Sheet



GENERAL NOTES:

1. ALL WORK IN CITY RIGHT-OF-WAY REQUIRES A PERMIT FROM THE CITY OF PUYALLUP. PRIOR TO ANY WORK COMMENCING, THE GENERAL CONTRACTOR SHALL ARRANGE FOR A PRECONSTRUCTION MEETING AT THE DEVELOPMENT SERVICES CENTER TO BE ATTENDED BY ALL CONTRACTORS THAT WILL PERFORM WORK SHOWN ON THE ENGINEERING PLANS, REPRESENTATIVES FROM ALL APPLICABLE UTILITY COMPANIES, THE PROJECT OWNER AND APPROPRIATE CITY STAFF. CONTACT ENGINEERING SERVICES AT (253-841-5568) TO SCHEDULE THE MEETING. THE CONTRACTOR IS RESPONSIBLE TO HAVE THEIR OWN SET OF APPROVED PLANS AT THE MEETING.

2. AFTER COMPLETION OF ALL ITEMS SHOWN ON THESE PLANS AND BEFORE ACCEPTANCE OF THE PROJECT THE CONTRACTOR SHALL OBTAIN A "PUNCH LIST" PREPARED BY THE CITY'S INSPECTOR DETAILING REMAINING ITEMS OF WORK TO BE COMPLETED. ALL ITEMS OF WORK SHOWN ON THESE PLANS SHALL BE COMPLETED TO THE SATISFACTION OF THE CITY PRIOR TO ACCEPTANCE OF THE WATER SYSTEM AND PROVISION OF SANITARY SEWER SERVICE.

3. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION (HEREINAFTER REFERRED TO AS THE "STANDARD SPECIFICATIONS"), WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND AMERICAN PUBLIC WORKS ASSOCIATION, WASHINGTON STATE CHAPTER, LATEST EDITION, UNLESS SUPERSEDED OR AMENDED BY THE CITY OF PUYALLUP CITY STANDARDS FOR PUBLIC WORKS ENGINEERING AND CONSTRUCTION (HEREINAFTER REFERRED TO AS THE "CITY STANDARDS").

4. A COPY OF THESE APPROVED PLANS AND APPLICABLE CITY DEVELOPER SPECIFICATIONS AND DETAILS SHALL BE ON SITE DURING CONSTRUCTION.

5. ANY REVISIONS MADE TO THESE PLANS MUST BE REVIEWED AND APPROVED BY THE DEVELOPER'S ENGINEER AND THE CITY PRIOR TO ANY IMPLEMENTATION IN THE FIELD. THE CITY SHALL NOT BE RESPONSIBLE FOR ANY ERRORS AND/OR OMISSIONS ON THESE PLANS.

6. THE CONTRACTOR SHALL HAVE ALL UTILITIES VERIFIED ON THE GROUND PRIOR TO ANY CONSTRUCTION. CALL (811) AT LEAST TWO WORKING DAYS IN ADVANCE. THE OWNER AND HIS/HER ENGINEER SHALL BE CONTACTED IMMEDIATELY IF A CONFLICT EXISTS.

7. ANY STRUCTURE AND/OR OBSTRUCTION THAT REQUIRES REMOVAL OR RELOCATION RELATING TO THIS PROJECT SHALL BE DONE SO AT THE DEVELOPER'S EXPENSE.

8. LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE TRUE ELEVATIONS AND LOCATIONS OF HIDDEN UTILITIES. ALL VISIBLE ITEMS SHALL BE THE ENGINEER'S RESPONSIBILITY.

9. THE CONTRACTOR SHALL INSTALL, REPLACE, OR RELOCATE ALL SIGNS, AS SHOWN ON THE PLANS OR AS AFFECTED BY CONSTRUCTION, PER CITY STANDARDS.

10. POWER, STREET LIGHT, CABLE, AND TELEPHONE LINES SHALL BE IN A TRENCH LOCATED WITHIN A 10-FOOT UTILITY EASEMENT ADJACENT TO PUBLIC RIGHT-OF-WAY. RIGHT-OF-WAY CROSSINGS SHALL HAVE A MINIMUM HORIZONTAL SEPARATION FROM OTHER UTILITIES (SEWER, WATER, AND STORM) OF 5 FEET.

11. ALL CONSTRUCTION SURVEYING FOR EXTENSIONS OF PUBLIC FACILITIES SHALL BE DONE UNDER THE DIRECTION OF A WASHINGTON STATE LICENSED LAND SURVEYOR OR A WASHINGTON STATE LICENSED PROFESSIONAL CIVIL ENGINEER.

12. DURING CONSTRUCTION, ALL PUBLIC STREETS ADJACENT TO THIS PROJECT SHALL BE KEPT CLEAN OF ALL MATERIAL DEPOSITS RESULTING FROM ON-SITE CONSTRUCTION, AND EXISTING STRUCTURES SHALL BE PROTECTED AS DIRECTED BY THE CITY.

13. CERTIFIED RECORD DRAWINGS ARE REQUIRED PRIOR TO PROJECT ACCEPTANCE.

14. A NPDES STORMWATER GENERAL PERMIT MAY BE REQUIRED BY THE DEPARTMENT OF ECOLOGY FOR THIS PROJECT. FOR INFORMATION CONTACT THE DEPARTMENT OF ECOLOGY, SOUTHWEST REGION OFFICE AT (360)407-6300.

15. ANY DISTURBANCE OR DAMAGE TO CRITICAL AREAS AND ASSOCIATED BUFFERS, OR SIGNIFICANT TREES DESIGNATED FOR PRESERVATION AND PROTECTION SHALL BE MITIGATED IN ACCORDANCE WITH A MITIGATION PLAN REVIEWED AND APPROVED BY THE CITY'S PLANNING DIVISION. PREPARATION AND IMPLEMENTATION OF THE MITIGATION PLAN SHALL BE AT THE DEVELOPER'S EXPENSE.

16. SHOULD THE CONTRACTOR FIND ANY DISCREPANCIES ON THE DRAWINGS, OR IN THE FIELD PRIOR TO BEGINNING WORK OR DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER & ENGINEER.

17. A COMPLETE SET OF APPROVED DRAWINGS MUST BE MAINTAINED ON SITE AT ALL TIMES BY THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS.

18. CHANGES TO APPROVED PLANS SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE OWNER AND ENGINEER.

19. ALL SITE AND RIGHT-OF-WAY CONSTRUCTION SHALL MEET CITY OF PUYALLUP STANDARD SPECIFICATIONS LATEST REVISION, IN THE CASE OF A DISCREPANCY BETWEEN THE PLANS AND SPECIFICATIONS, THE CITY'S DESIGN AND TECHNICAL REQUIREMENTS SHALL GOVERN.

20. ANY WORK ON EXISTING CITY OWNED UTILITIES SHALL REQUIRE NOTIFICATION TO THE CITY BY THE CONTRACTOR 24 HOURS PRIOR TO COMMENCING WORK.

21. THE CONTRACTOR SHALL COMPLY WITH ALL RULES & REGULATIONS OF FEDERAL, STATE, COUNTY, & LOCAL AUTHORITIES.

22. THE CONTRACTOR IS REQUIRED TO MEET ALL APPLICABLE FEDERAL, OSHA, STATE, AND LOCAL REGULATIONS CONCERNING PROJECT SAFETY AND ASSUMES FULL RESPONSIBILITY FOR SAFETY ON THE PROJECT.

23. CONTRACTOR SHALL VERIFY THAT ALL NECESSARY PERMITS FOR CONSTRUCTION HAVE BEEN OBTAINED, ALL BONDS ARE POSTED, ALL FEES ARE PAID AND PROOF OF INSURANCE IS PROVIDED PRIOR TO THE START OF THE PROJECT.

24. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL HORIZONTAL AND VERTICAL CONTROLS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SURVEY AND RELATED COSTS.

25. CONTRACTOR SHALL BE RESPONSIBLE FOR HIS/HER OWN MEASUREMENTS AND QUANTITIES. ENGINEER QUANTITIES ARE ESTIMATES ONLY.

26. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING INSTALLATION OF UNDERGROUND UTILITIES BY THE APPROPRIATE UTILITY ENTITY. PROPER COORDINATION WITH THE RESPECTIVE UTILITY ENTITIES SHALL BE PERFORMED BY THE CONTRACTOR TO INSURE THAT ALL UTILITY ENTITY STANDARDS FOR MATERIAL AND METHODS ARE MET. THE GENERAL CONTRACTOR SHALL OVERSEE INSTALLATION OF UTILITIES AND COORDINATE WITH ALL SUBCONTRACTORS TO AVOID CONFLICTS.

27. THE CONTRACTOR SHALL PROVIDE AS-BUILT RECORDS OF ALL CONSTRUCTION (INCLUDING UNDERGROUND UTILITIES) TO THE OWNER FOLLOWING COMPLETION OF CONSTRUCTION ACTIVITIES.

28. THE CONTRACTOR SHALL PROVIDE TESTING, INSPECTIONS, AS-BUILT DRAWINGS, CERTIFICATIONS AND ANY OTHER PROCEDURES OR DOCUMENTATION REQUIRED BY THE GOVERNING AGENCIES TO CLOSE OUT THE PROJECT.

29. THE CONTRACTOR SHALL RESTORE ANY STRUCTURES, PIPE, UTILITY, PAVEMENT, CURBS SIDEWALKS, LANDSCAPED AREAS, ETC. WITHIN THE SITE OR ADJOINING PROPERTIES DISTURBED DURING DEMOLITION OR CONSTRUCTION TO THEIR ORIGINAL CONDITION OF BETTER, AND TO THE SATISFACTION OF THE OWNER/JURISDICTIONAL AUTHORITY.

30. CONTRACTOR SHALL REFERENCE THE PROJECT GEOTECHNICAL REPORT AVAILABLE IN THE PROJECT MANUAL AND COMPLY WITH ALL REPORT REQUIREMENTS. IF A CONFLICT ARISES BETWEEN THE GEOTECHNICAL REPORT AND CIVIL DOCUMENTS, THE GEOTECHNICAL REPORT SHALL GOVERN.

31. FOR THE PURPOSES OF CONSTRUCTION SURVEY, ALL BUILDING DIMENSIONS SHALL BE VERIFIED WITH STRUCTURAL AND ARCHITECTURAL PLANS.

32. FIRE DEPARTMENT ACCESS ROADWAYS SHALL BE INSTALLED PRIOR TO VERTICAL CONSTRUCTION. FIRE ACCESS ROADWAYS SHALL BE INSTALLED AND MAINTAINED PER PUYALLUP FIRE DEPARTMENT REQUIREMENTS.

33. CONTRACTOR SHALL POST A FIRE DEPARTMENT ACCESS SIGN PER PUYALLUP FIRE DEPARTMENT REQUIREMENTS.

34. CONTRACTOR SHALL PROVIDE TEMPORARY FIRE EXTINGUISHERS ON SITE DURING CONSTRUCTION PER PUYALLUP FIRE DEPARTMENT REQUIREMENTS.

35. COMBUSTIBLE WASTE AND CONSTRUCTION DEBRIS SHALL BE KEPT TO A MINIMUM AND SHALL NOT BE LOCATED AS TO OBSTRUCT ANY ACCESS ROAD OR FIRE APPLIANCE.

36. ONCE VERTICAL CONSTRUCTION BEGINS OR ONCE COMBUSTIBLE MATERIALS ARE BROUGHT ONTO THE SITE, PER THE WASHINGTON FIRE CODE--CHAPTER 14, AN APPROVED WATER SUPPLY FOR FIRE PROTECTION SHALL BE INSTALLED AND APPROVED BY PUYALLUP FIRE DEPARTMENT, AND MAINTAINED OPERABLE THROUGHOUT THE CONSTRUCTION PROCESS.

37. APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS.

38. NON-STANDARD ITEMS (IE: RAVERS, IRRIGATION SYSTEMS, ETC.) IN THE RIGHT-OF-WAY REQUIRE A PAID-OFF-WAY ENCROACHMENT AGREEMENT WITH THE PUYALLUP DEPARTMENT OF TRANSPORTATION/WASHINGTON DEPARTMENT OF TRANSPORTATION BEFORE INSTALLATION.

SANITARY SEWER NOTES:

1. ALL WORK IN CITY RIGHT-OF-WAY REQUIRES A PERMIT FROM THE CITY OF PUYALLUP. PRIOR TO ANY WORK COMMENCING, THE GENERAL CONTRACTOR SHALL ARRANGE FOR A PRECONSTRUCTION MEETING AT THE DEVELOPMENT SERVICES CENTER TO BE ATTENDED BY ALL CONTRACTORS THAT WILL PERFORM WORK SHOWN ON THE ENGINEERING PLANS, REPRESENTATIVES FROM ALL APPLICABLE UTILITY COMPANIES, THE PROJECT OWNER AND APPROPRIATE CITY STAFF. CONTACT ENGINEERING SERVICES TO SCHEDULE THE MEETING (253) 841-5568. THE CONTRACTOR IS RESPONSIBLE TO HAVE THEIR OWN APPROVED SET OF PLANS AT THE MEETING.

2. AFTER COMPLETION OF ALL ITEMS SHOWN ON THESE PLANS AND BEFORE ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL OBTAIN A "PUNCH LIST" PREPARED BY THE CITY'S INSPECTOR DETAILING REMAINING ITEMS OF WORK TO BE COMPLETED. ALL ITEMS OF WORK SHOWN ON THESE PLANS SHALL BE COMPLETED TO THE SATISFACTION OF THE CITY PRIOR TO ACCEPTANCE OF THE SEWER SYSTEM AND PROVISION OF SANITARY SEWER SERVICE.

3. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION (HEREINAFTER REFERRED TO AS THE "STANDARD SPECIFICATIONS"), WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND AMERICAN PUBLIC WORKS ASSOCIATION, WASHINGTON STATE CHAPTER, LATEST EDITION, UNLESS SUPERSEDED OR AMENDED BY THE CITY OF PUYALLUP CITY STANDARDS FOR PUBLIC WORKS ENGINEERING AND CONSTRUCTION (HEREINAFTER REFERRED TO AS THE "CITY STANDARDS").

4. A COPY OF THESE APPROVED PLANS AND APPLICABLE CITY DEVELOPER SPECIFICATIONS AND DETAILS SHALL BE ON SITE DURING CONSTRUCTION.

5. ANY REVISIONS MADE TO THESE PLANS MUST BE REVIEWED AND APPROVED BY THE DEVELOPER'S ENGINEER AND THE ENGINEERING SERVICES STAFF PRIOR TO ANY IMPLEMENTATION IN THE FIELD. THE CITY SHALL NOT BE RESPONSIBLE FOR ANY ERRORS AND/OR OMISSIONS ON THESE PLANS.

6. THE CONTRACTOR SHALL HAVE ALL UTILITIES VERIFIED ON THE GROUND PRIOR TO ANY CONSTRUCTION. CALL (811) AT LEAST TWO WORKING DAYS IN ADVANCE. THE OWNER AND HIS/HER ENGINEER SHALL BE CONTACTED IMMEDIATELY IF A CONFLICT EXISTS.

7. ANY STRUCTURE AND/OR OBSTRUCTION WHICH REQUIRE REMOVAL OR RELOCATION RELATING TO THIS PROJECT SHALL BE DONE SO AT THE DEVELOPER'S EXPENSE.

8. MINIMUM GRADE ON ALL 4 INCH RESIDENTIAL SIDE SEWERS SHALL BE 2 PERCENT AND 6 INCH COMMERCIAL SIDE SEWERS SHALL BE 1 PERCENT; MAXIMUM SHALL BE 8 PERCENT. ALL SIDE SEWERS SHALL BE 6 INCHES WITHIN CITY RIGHT-OF-WAY.

9. SIDE SEWERS SHALL BE INSTALLED IN ACCORDANCE WITH CITY STANDARD NOS. 04.03.01, 04.03.02, 04.03.03 AND 04.03.04. SIDE SEWER INSTALLATION WORK SHALL BE DONE IN ACCORDANCE WITH THE WASHINGTON INDUSTRIAL SAFETY AND HEALTH ACT (WISHA).

10. ALL SEWER PIPE SHALL BE PVC, POLYPROPYLENE, OR DUCTILE IRON. PVC SEWER PIPE SHALL CONFORM TO ASTM D-3034, SDR35 FOR PIPE SIZES 15-INCH AND SMALLER AND ASTM F679 FOR PIPE SIZES 18- TO 27-INCH. DUCTILE IRON PIPE SHALL BE CLASS 51 OR GREATER, LINED WITH PROTECTO 401TM EPOXY LINING OR EQUIVALENT, UNLESS OTHERWISE NOTED. 12-INCH THROUGH 30-INCH POLYPROPYLENE PIPE (PP) SHALL BE DUAL WALLED, HAVE A SMOOTH INTERIOR AND EXTERIOR CORRUGATIONS AND MEET WSDOT 9-05.24(2). IT SHALL MEET OR EXCEED ASTM F2764. 36-INCH THROUGH 60-INCH PP PIPE SHALL BE TRIPLE WALLED AND MEET WSDOT 9-05.24(2). IT SHALL MEET OR EXCEED ASTM F2764. PP SHALL HAVE A MINIMUM PIPE STIFFNESS OF 46 PI WHEN TESTED IN ACCORDANCE WITH ASTM D2412. TESTING SHALL BE PER ASTM F1417. TRENCHING, BEDDING, AND BACKFILL SHALL BE IN ACCORDANCE WITH CITY STANDARD NO. 06.01.01. MINIMUM COVER ON PVC AND PP PIPE SHALL BE 3.0 FEET. MINIMUM COVER ON DUCTILE IRON PIPE SHALL BE 1.0 FOOT.

11. SANITARY SEWER MANHOLE FRAMES AND COVERS SHALL CONFORM TO CITY STANDARD NO. 06.01.02.

12. SANITARY SEWER MANHOLES SHALL CONFORM TO CITY STANDARD NOS. 04.01.01, 04.01.02, 04.01.03 AND 04.01.04. ALL MANHOLES SHALL BE CHANNELLED FOR FUTURE LINES AS SPECIFIED ON THESE PLANS. MANHOLE STEPS AND LADDER SHALL CONFORM TO STANDARD NO. 06.01.03.

13. SANITARY SEWER PIPE AND SIDE SEWERS SHALL BE 10 FEET AWAY FROM BUILDING FOUNDATIONS AND/OR ROOF LINES WITH THE EXCEPTION OF SIDE SEWERS THAT PROVIDE SERVICE TO A SINGLE-FAMILY RESIDENCE. AT THE DISCRETION OF THE REVIEW ENGINEER, A LICENSED PROFESSIONAL ENGINEER WILL BE REQUIRED TO STAMP THE DESIGN TO ACCOUNT FOR DEPTH OR PROXIMITY TO FOUNDATION, STEEP SLOPES, OR OTHER FACTORS.

14. NO SIDE SEWERS SHALL BE CONNECTED TO ANY HOUSE OR BUILDING UNTIL ALL MANHOLES ARE ADJUSTED TO THE FINISHED GRADE OF THE COMPLETED ASPHALT ROADWAY AND THE ASPHALT PATCH AND SEAL AROUND THE RING ARE ACCEPTED.

15. FOR COMMERCIAL DEVELOPMENTS IN WHICH SOURCES OF GREASE AND/OR OILS MAY BE INTRODUCED TO THE CITY SANITARY SEWER SYSTEM, A CITY APPROVED GREASE INTERCEPTOR SHALL BE INSTALLED DOWNSTREAM FROM THE SOURCE.

16. ONCE SEWER AND ALL OTHER UTILITY CONSTRUCTION IS COMPLETED, ALL SANITARY SEWER MAINS AND SIDE SEWERS SHALL BE TESTED PER SECTION 406 OF THE CITY STANDARDS.

17. LOCATIONS AND TOP ELEVATIONS OF STRUCTURES MAY NEED TO BE ADJUSTED IN THE FIELD BY THE CONTRACTOR WHERE NECESSARY AND SHALL BE APPROVED BY THE ENGINEER. CONTRACTOR SHALL NOTE ALL CHANGES ON AS-BUILT DRAWINGS.

18. CONSTRUCTION OF THE SANITARY SEWER SYSTEM AND CONNECTION TO THE EXISTING SEWER SYSTEM SHALL MEET THE REQUIREMENTS OF AND SHALL BE INSTALLED UNDER THE DIRECTION OF THE CITY OF PUYALLUP.

19. CONTRACTOR SHALL CONFIRM LOCATION AND INVERT ELEVATION OF SEWER TIE-IN POINT PRIOR TO ANY SITE OR BUILDING CONSTRUCTION.

20. ROOF DRAINS, FOUNDATION DRAINS OR OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED.

21. SANITARY SEWER MAINS SHALL HAVE A 95% DIAMETER M





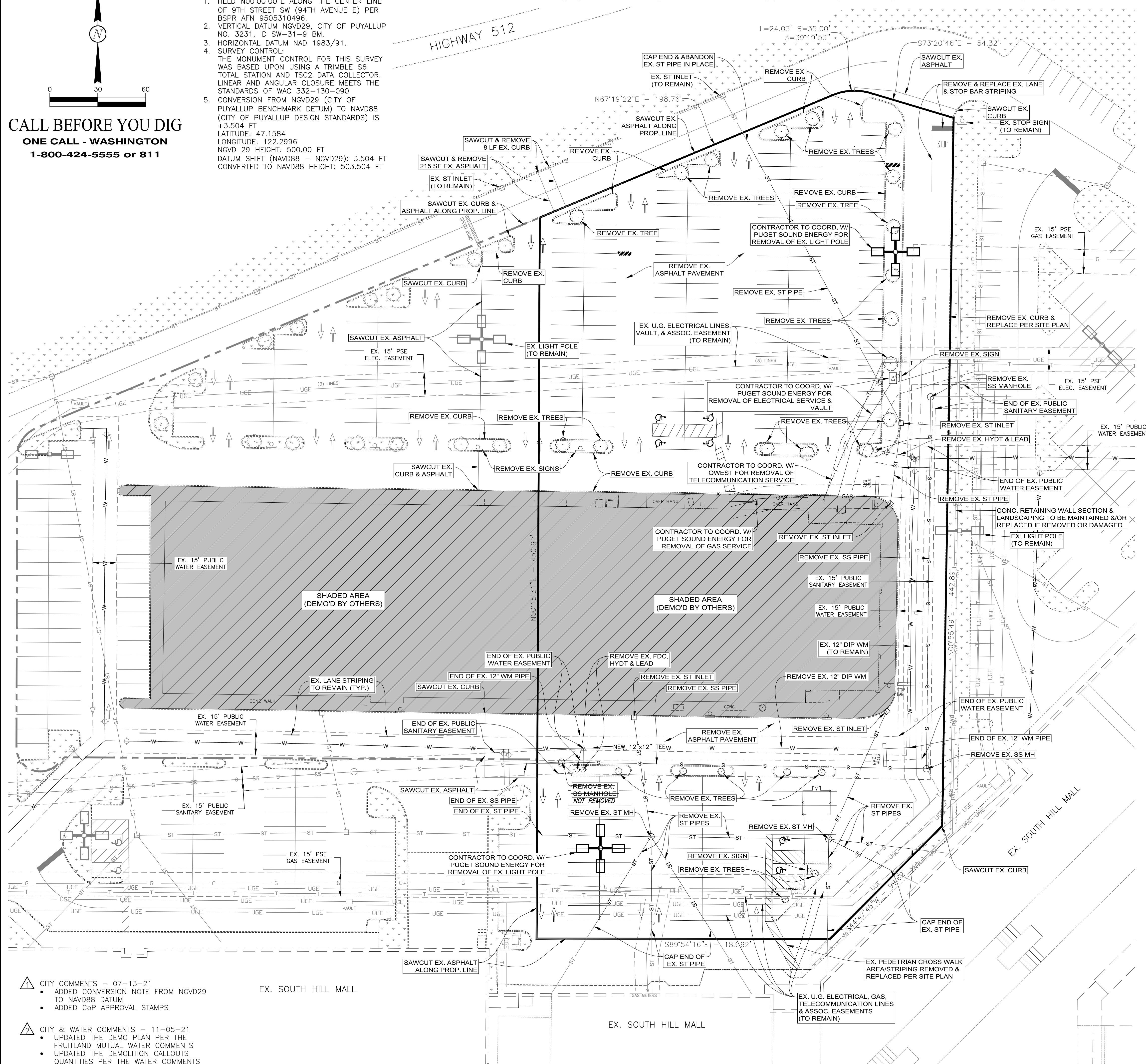




**BASIS OF BEARINGS:**

1. HELD N00°00'00"E ALONG THE CENTER LINE OF 9TH STREET SW (94TH AVENUE E) PER BSPR AFN 9505310496.
2. VERTICAL DATUM NGVD29, CITY OF PUYALLUP NO. 3231, ID SW—31—9 M.
3. HORIZONTAL DATUM NAD 1983/91.
4. SURVEY CONTROL:  
THE MONUMENT CONTROL FOR THIS SURVEY IS BASED UPON USING A TRIMBLE 56 TOTAL STATION AND TSC2 DATA COLLECTOR. LINEAR AND ANGULAR CLOSURE MEETS THE STANDARDS OF WAC 332-130-090
5. CONVERSION FROM NGVD29 (CITY OF PUYALLUP BENCHMARK DETUM) TO NAVD88 (CITY OF PUYALLUP DESIGN STANDARDS) IS +3.504 FT  
LATITUDE: 47.1584  
LONGITUDE: 122.2996  
NGVD 29 HEIGHT: 500.00 FT  
DATUM SHIFT (NAVD88 - NGVD29): 3.504 FT  
CONVERTED TO NAVD88 HEIGHT: 503.504 FT

HIGHWAY 512



DEMOLITION CALLOUTS		
ITEM	QUANTITY	UNIT
REMOVE EX. TREE	24	EA
REMOVE EX. ASPHALT PAVEMENT	10,556	SY
REMOVE EX. CURB	2,570	LF
REMOVE EX. SIGN	6	EA
REMOVE EX. LIGHT POLE	2	EA
REMOVE EX. GAS SERVICE	118	LF
REMOVE EX. TELEPHONE SERVICE	132	LF
REMOVE EX. ELECTRICAL SERVICE	113	LF
REMOVE EX. ELECTRICAL JUNCTION BOX	1	EA
REMOVE EX. WATER SERVICE	27	LF
REMOVE EX. 12" DIP WATER MAIN	204	LF
REMOVE EX. 6" GATE VALVE	2	EA
REMOVE EX. FIRE DEPARTMENT CONNECTION	1	EA
REMOVE EX. HYDRANT W/ LEAD	2	EA
REMOVE EX. 8" PVC SANITARY PIPE	483	LF
REMOVE EX. SANITARY MANHOLE	3	EA
REMOVE EX. 6" PVC STORM PIPE	348	LF
REMOVE EX. 12" PVC STORM PIPE	327	LF
REMOVE EX. 18" PVC STORM PIPE	267	LF
REMOVE EX. STORM INLET	4	EA
REMOVE EX. STORM MANHOLE	2	EA

 REMOVAL AREAS BY OTHERS

**DEMOLITION NOTES:**

1. CONCRETE CURB AND GUTTER TO BE REMOVED SHALL BE SAW CUT IN FULL SECTIONS.
2. CONTRACTOR SHALL SAW CUT EXISTING PAVEMENT FOR REMOVAL. PAVEMENT SHALL BE REMOVED IN FULL SECTIONS.
3. ALL STRUCTURES AND HARD SURFACES (CONCRETE & ASPHALT) INSIDE THE PROPERTY BOUNDARY AND EASEMENTS SHOWN SHALL BE REMOVED. THE CONTRACTOR IS ENCOURAGED TO VISIT THE SITE IN ORDER TO BID APPROPRIATELY.
4. QUANTITIES SHOWN AS ESTIMATES ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL QUANTITIES. THE CONTRACTOR SHALL BE AWARE THAT THE SURFACE OF THE SITE CONTAINS VARIOUS HARD SURFACES & ITEMS THAT ARE DIFFICULT TO SPECIFICALLY QUANTIFY.
5. IF ANY PAVEMENT THAT IS NOT SUPPOSED TO BE REMOVED IS DAMAGED DURING CONSTRUCTION, THE CONTRACTOR SHALL SAW CUT AND PATCH THE PAVEMENT AT OWN EXPENSE.
6. LIMITS OF STREET PATCHING AND PATCHING REQUIREMENTS SHALL BE VERIFIED WITH THE CITY OF PUYALLUP.
7. CONTRACTOR RESPONSIBLE FOR DISPOSING ALL WASTE MATERIALS OFFSITE IN ACCORDANCE WITH LOCAL, STATE, & FEDERAL LAWS. THIS INCLUDES BUT IS NOT LIMITED TO WASTE GENERATED FROM DEMOLITION AND REMOVALS, ORGANIC MATTER, METAL, ASPHALT, CONCRETE, AGGREGATE, ETC.
8. CONTRACTOR TO COORDINATE REMOVAL OF EXISTING LIGHT POLES & ELECTRICAL/GAS SERVICES WITH LOCAL UTILITY PROVIDER, PUGET SOUND ENERGY. (888)321-7779.
9. CONTRACTOR TO COORDINATE REMOVAL OF EXISTING TELECOMMUNICATION SERVICE WITH LOCAL UTILITY PROVIDER, QWEST, (800)526-3557.
10. CONTRACTOR TO COORDINATE REMOVAL & CAPPING AT THE MAIN OF EXISTING WATER SERVICE WITH LOCAL UTILITY PROVIDER, FRUITLAND MUTUAL WATER, (253)848-5519.
11. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL AS REQUIRED ALONG ADJACENT ROADWAYS DURING EXCAVATION.
12. CONTRACTOR SHALL MAINTAIN THE EXISTING CONCRETE RETAINING WALL & ASSOCIATED LANDSCAPING ALONG THE EASTERN PROPERTY LINE DURING ALL CONSTRUCTION ACTIVITIES. IF THE EXISTING WALL &/OR LANDSCAPING IS DAMAGED OR REMOVED THE CONTRACTOR MUST REPLACE AT OWN EXPENSE.
13. SUBJECT PROPERTY LIES IN "OTHER AREAS-ZONE X" PER FEMA FLOOD INSURANCE RATE MAP NO. 53053C0341E REVISED MARCH 7, 2017. "OTHER AREAS-ZONE X" IS DESCRIBED AS "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANGE FLOODPLAIN.
14. ALTA SURVEY CONDUCTED BY TRUE POINT SURVEYING ON 7/25/2018.

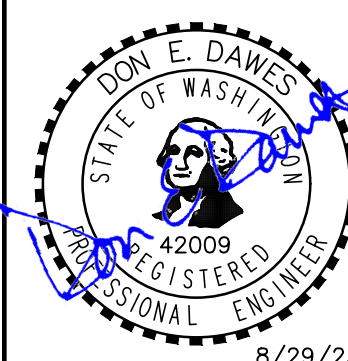
**WATER SEQUENCING:**

1. CONTRACTOR SHALL LIVE TAP AT BOTH ENDS OF EXISTING 12" DUCTILE IRON PIPE (DIP) WATER MAIN; SHUT OFF WATER; MAINTAIN EXISTING WATER LOOP AS NECESSARY.
2. CONTRACTOR SHALL CONSTRUCT PROPOSED WATER SYSTEM AS SHOWN ON THE WATER & SANITARY UTILITY PLAN SHEET C-4.
3. CONTRACTOR SHALL TEST NEW WATER SYSTEM FROM LIVE TAP TO LIVE TAP LOCATIONS PER FRUITLAND MUTUAL WATER'S STANDARDS. ONCE TESTING PASSES SHUT DOWN EXISTING LOOP. CAP JUST INSIDE EACH EXISTING TAP LOCATION.
4. CONTRACTOR SHALL REMOVE/DECOMMISSION EXISTING WATER PIPE PER DEMOLITION PLAN.

APPROVED	APPROVED
BY _____ CITY OF PUYALLUP ENGINEERING SERVICES	BY _____ WATER PURVEYOR
DATE _____	DATE _____
NOTE: THIS APPROVAL IS VOID AFTER 1 YEAR FROM APPROVAL DATE.	NOTE: THIS APPROVAL IS VOID AFTER 1 YEAR FROM APPROVAL DATE.
THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS.	WATER PURVEYOR WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS.
FIELD CONDITIONS MAY DICTATE CHANGES TO THE PLANS AS DETERMINED BY THE ENGINEERING SERVICES MANAGER.	FIELD CONDITIONS MAY DICTATE CHANGES TO THE PLANS AS DETERMINED BY THE WATER PURVEYOR.

DC	DD	DD	Revised Per Site Plan Changes
By	Ckd.	Appr.	Revision

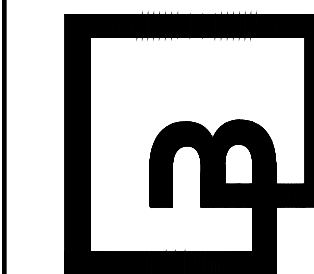
HERITAGE INN & SUITES OF  
PUYALLUP, LLC  
4500 36TH AVE. S, SUITE 200  
FARGO, NE 58104



Scale: Horizontal 1" = 60' Vertical N/A

Designed	DC
Drawn	DC
Checked	DD
Approved	DD

**Barghausen**  
**Consulting Engineers, LLC.**  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222 **barghausen.com**



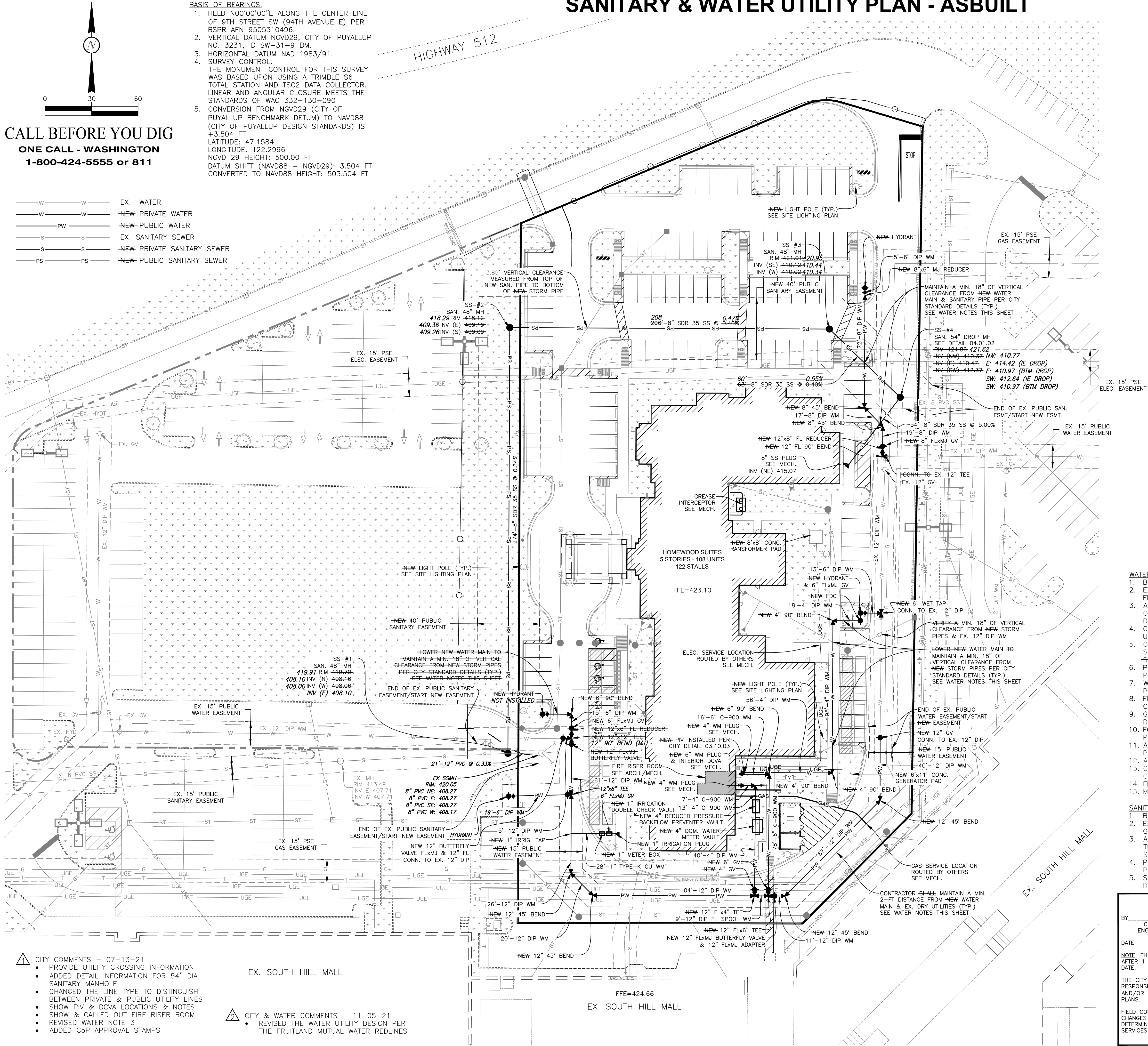
Job Number  
22507



CALL BEFORE YOU DIG  
ONE CALL - WASHINGTON  
1-800-424-5555 or 811

- BASIS OF BEARINGS:
1. HELD 00°00'00"E ALONG THE CENTER LINE OF 9TH STREET SW (94TH AVENUE E) PER BSPR AFN 9505310496.
  2. VERTICAL DATUM NGVD29, CITY OF PUYALLUP NO. 3231, ID SW-31-9 BM.
  3. HORIZONTAL DATUM NAD 1983/91.
  4. SURVEY CONTROL:  
THE MONUMENT CONTROL FOR THIS SURVEY WAS BASED UPON USING A TRIMBLE S6 TOTAL STATION AND TSC2 DATA COLLECTOR. LINEAR AND ANGULAR CLOSURE MEETS THE STANDARDS OF WAC 332-130-090
  5. CONVERSION FROM NGVD29 (CITY OF PUYALLUP BENCHMARK DETUM) TO NAVD88 (CITY OF PUYALLUP DESIGN STANDARDS) IS +3.504 FT  
LATITUDE: 47.1584  
LONGITUDE: 122.2996  
NGVD 29 HEIGHT: 500.00 FT  
DATUM SHIFT (NAVD88 - NGVD29): 3.504 FT  
CONVERTED TO NAVD88 HEIGHT: 503.504 FT

- W—W— EX. WATER  
—W—W— NEW PRIVATE WATER  
—PW— PW— NEW-PUBLIC WATER  
—S—S— EX. SANITARY SEWER  
—S—S— NEW PRIVATE SANITARY SEWER  
—PS—PS— NEW-PUBLIC SANITARY SEWER



ESTIMATED WATER QUANTITIES		
ITEM	QUANTITY	UNIT
1" TYPE-K COPPER SERVICE	28	LF
4" DIP WM	212	LF
4" C-900 WM	27	LF
6" DIP WM	52	LF
6" C-900 WM	94	LF
8" DIP WM	108	LF
12" DIP WM	363	LF
8" 45° BEND	2	EA
12" 45° BEND	4	EA
4" 90° BEND	3	EA
6" 90° BEND	2	EA
12" 90° BEND	1	EA
12"x4" TEE	1	EA
12"x6" TEE	1	EA
12"x12" TEE	1	EA
4" GATE VALVE	1	EA
6" GATE VALVE	3	EA
8" GATE VALVE	1	EA
12" GATE VALVE	4	EA
8"x6" REDUCER	1	EA
12"x6" REDUCER	1	EA
12"x8" REDUCER	1	EA
12"x6" WET TAP	1	EA
REMOTE FDC	1	EA
FIRE HYDRANT	3	EA
POST INDICATOR VALVE	1	EA
1" IRRIGATION DOUBLE CHECK METER VAULT	1	EA
1" WATER METER BOX	1	EA
4" WATER SERVICE METER VAULT	1	EA
4" REDUCED PRESSURE BACKFLOW PREVENTER	1	EA
CONNECT TO EXISTING 12" WM	2	EA

ESTIMATED SANITARY QUANTITIES		
ITEM	QUANTITY	UNIT
8" SDR-35 SANITARY SERVICE PIPE	597	LF
STANDARD SANITARY MANHOLE	3	EA
SANITARY DROP MANHOLE	1	EA
CONNECT TO EXISTING	2	EA

- WATER NOTES:
1. BUILDING WATER CONNECTIONS PER MECHANICAL.
  2. EXISTING WATER MAIN VALVE RIMS & STEMS ARE TO BE RAISED OR LOWERED TO FINAL GRADE, AS NEEDED.
  3. ALL WATER INFRASTRUCTURE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF PUYALLUP & FRUITLAND WATER STANDARD CONSTRUCTION DETAILS. SEE UTILITY DETAILS SHEETS FOR MORE INFO.
  4. CONTRACTOR SHALL REQUEST AS-BUILT PLANS FROM THE CITY OF PUYALLUP & DRY UTILITY COMPANIES PRIOR TO EXCAVATING.
  5. CONTRACTOR TO COORDINATE ALL WATER MAIN RELOCATES WITH FRUITLAND WATER & SOUTH HILL MALL MANAGEMENT STAFF. INSPECTION OF INSTALLED PUBLIC WATER MAIN SHALL BE COORDINATED WITH FRUITLAND WATER.
  6. PIPE TRENCHING, BEDDING, & BACKFILL SHALL BE IN ACCORDANCE WITH CITY OF PUYALLUP STANDARD CONSTRUCTION DETAIL NO. 06.01.01.
  7. WATER METER & BACKFLOW PREVENTER VAULTS SHALL BE INSTALLED PER CITY OF PUYALLUP STANDARD CONSTRUCTION DETAIL NO. 03.03.03, 03.03.04, & 03.11.01.
  8. FIRE HYDRANTS SHALL BE INSTALLED PER CITY OF PUYALLUP STANDARD CONSTRUCTION DETAIL NO. 03.05.01.
  9. GATE VALVES SHALL BE INSTALLED PER CITY OF PUYALLUP STANDARD CONSTRUCTION DETAIL NO. 03.01.01.
  10. FOR CONSTRUCTION SEQUENCING FOR WATER SEE SURVEY OVERLAY & DEMOLITION PLAN SHEET C-3 FOR MORE INFO.
  11. ALL WATER MAIN CROSSING OTHER UTILITIES SHALL BE INSTALLED PER CITY OF PUYALLUP STANDARD CONSTRUCTION DETAIL NO. 03.01.03-1 & 03.01.03-2.
  12. ALL MECHANICAL JOINT FITTINGS SHALL HAVE MEGA LUGS.
  13. CONTRACTOR SHALL FIELD LOCK GASKET MINIMUM 2 JOINTS EACH WAY FROM ANY CHANGE IN DIRECTION OR DEAD END.
  14. FIELD LOCK GASKETS TWO JOINTS BEFORE & AFTER ANY CHANGE IN DIRECTION
  15. MEGALUGS ON ALL MECHANICAL JOINT FITTINGS.

- SANITARY SEWER NOTES:
1. BUILDING SANITARY SEWER CONNECTION PER MECHANICAL.
  2. EXISTING SEWER MAIN MANHOLES RIMS ARE TO BE RAISED OR LOWERED TO FINAL GRADE, AS NEEDED.
  3. ALL SANITARY SEWER INFRASTRUCTURE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF PUYALLUP STANDARD CONSTRUCTION DETAILS. SEE UTILITY DETAILS SHEETS FOR MORE INFO.
  4. PIPE TRENCHING, BEDDING, & BACKFILL SHALL BE IN ACCORDANCE WITH CITY OF PUYALLUP STANDARD CONSTRUCTION DETAIL NO. 06.01.01.
  5. SEWER MAIN TAPPING SHALL BE PER CITY OF PUYALLUP STANDARD CONSTRUCTION DETAIL NO. 01.02.01.

APPROVED

BY: \_\_\_\_\_  
CITY OF PUYALLUP  
ENGINEERING SERVICES

DATE: \_\_\_\_\_

NOTE: THIS APPROVAL IS VOID AFTER 1 YEAR FROM APPROVAL DATE.

THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS.

FIELD CONDITIONS MAY DICTATE CHANGES TO THE PLANS AS DETERMINED BY THE ENGINEERING SERVICES MANAGER.

FIRE HYDRANT/FDC LOCATION/ACCESS APPROVED

BY: \_\_\_\_\_  
CITY OF PUYALLUP  
FIRE CODE OFFICIAL

DATE: \_\_\_\_\_

NOTE: THIS APPROVAL IS VOID AFTER 1 YEAR FROM APPROVAL DATE.

THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS.

FIELD CONDITIONS MAY DICTATE CHANGES TO THE PLANS AS DETERMINED BY THE FIRE CODE OFFICIAL.

APPROVED

BY: \_\_\_\_\_  
WATER PURVEYOR

DATE: \_\_\_\_\_

NOTE: THIS APPROVAL IS VOID AFTER 1 YEAR FROM APPROVAL DATE.

WATER PURVEYOR WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS.

FIELD CONDITIONS MAY DICTATE CHANGES TO THE PLANS AS DETERMINED BY THE WATER PURVEYOR.

Revision

2/15/25	DC	By	Date	Appr.
2/15/25	DD	Ckd.		
2/15/25	DD			

Title: **SANITARY & WATER UTILITY PLAN - ASBUILT**

For: **HERITAGE INN & SUITES OF PUYALLUP, LLC**  
**4500 36TH AVE. S, SUITE 200**  
**FARGO, NE 58104**

Scale: Horizontal 1"=30' Vertical N/A

Designed: \_\_\_\_\_ Drawn: \_\_\_\_\_ Checked: \_\_\_\_\_ Approved: \_\_\_\_\_ Date: 8/29/25

**Barghausen Consulting Engineers, LLC.**  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222 [barghausen.com](http://barghausen.com)

Job Number: **22507**

Sheet: **C-4** of **8**





**BASIS OF BEARINGS:**

1. HELD N00°00'00"E ALONG THE CENTER LINE OF 9TH STREET SW (94TH AVENUE E) PER BSPR AFN 9505310496.
2. VERTICAL DATUM NGVD29, CITY OF PUYALLUP NO. 3231, ID SW-31-9 BM.
3. HORIZONTAL DATUM NAD 1983/91.

**SURVEY CONTROL**

THE MONUMENT CONTROL FOR THIS SURVEY WAS BASED UPON USING A TRIMBLE 56 TOTAL STATION AND TSC2 DATA COLLECTOR. LINEAR AND ANGULAR CLOSURE MEETS THE STANDARDS OF WAC 332-130-090

5. CONVERSION FROM NGVD29 (CITY OF PUYALLUP BENCHMARK DETUM) TO NAVD88 (CITY OF PUYALLUP DESIGN STANDARDS) IS +3.504 FT

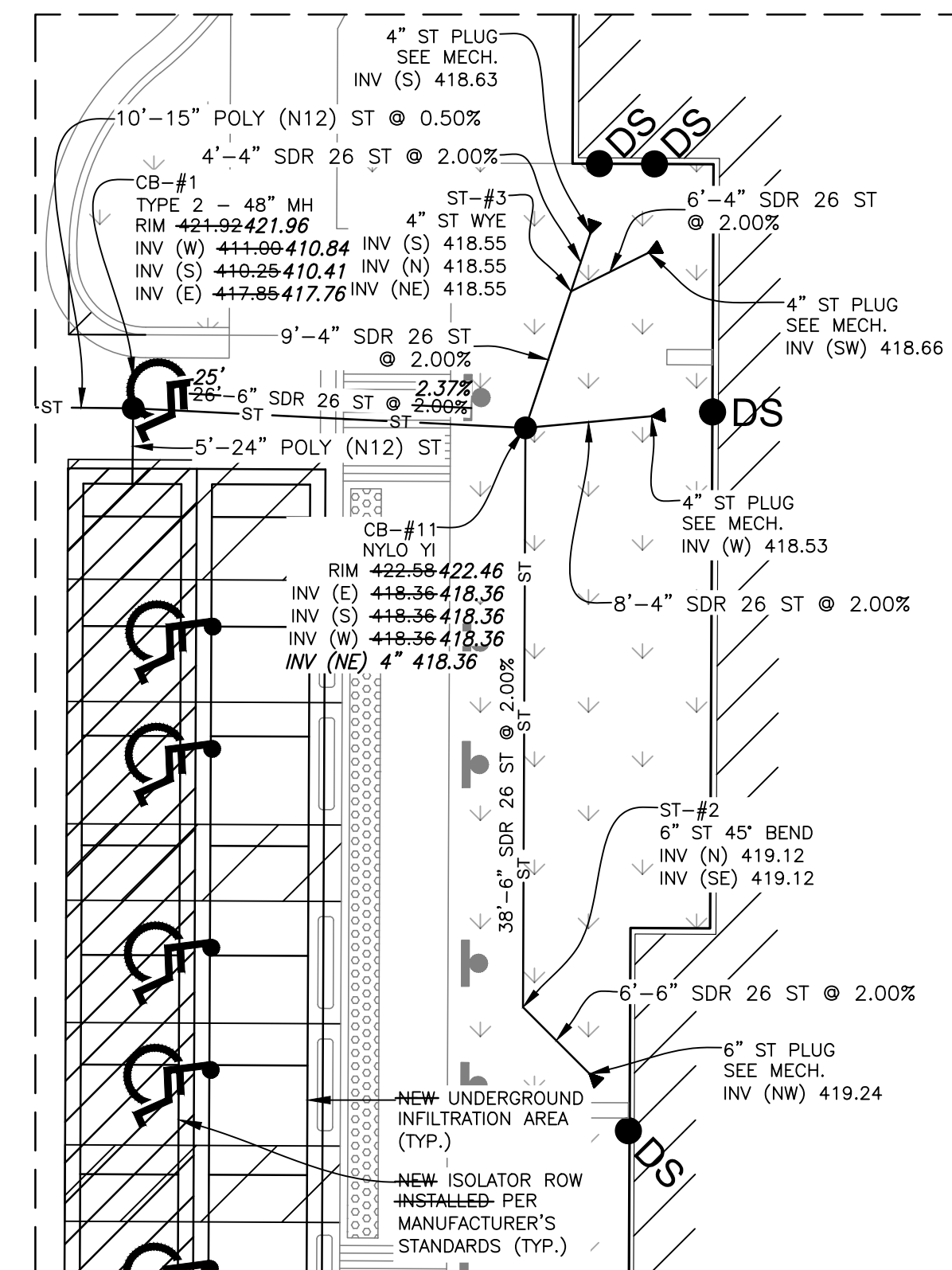
LATITUDE: 47.1584  
LONGITUDE: 122.2996  
NGVD 29 HEIGHT: 500.00 FT  
DATUM SHIFT (NAVD88 - NGVD29): 3.504 FT  
CONVERTED TO NAVD88 HEIGHT: 503.504 FT

[illegible]


ESTIMATED STORM QUANTITIES		
ITEM	QUANTITY	UNIT
4" HDPE STORM PIPE	198	LF
6" HDPE STORM PIPE	162	LF
8" HDPE STORM PIPE	296	LF
12" HDPE STORM PIPE	350	LF
12" DUCTILE IRON PIPE	112	LF
15" HDPE STORM PIPE	22	LF
24" HDPE STORM PIPE	9	LF
SINGLE BOX INLET (TYPE-1)	6	EA
STANDARD MANHOLE/INLET (TYPE-2)	7	EA
NYLOPLAST YARD INLET	2	EA
4" STORM WYE	1	EA
4" STORM TEE	2	EA
4" ADS INSERTA TEE	1	EA
6" 45° STORM BEND	1	EA
6" ADS INSERTA TEE	6	EA
8" STORM CLEANOUT	4	EA
8" STORM WYE	4	EA
DOWNSPOUT	9	EA
STORMFILTER DEVICE	2	EA
UNDERGROUND STORAGE/INFILTRATION FACILITY	2	EA

STORM SEWER & DRAINAGE NOTES:

1. BUILDING STORM ROOF LEADER/DOWNSPOUT CONNECTIONS PER MECHANICAL.
2. ALL STORM SEWER INFRASTRUCTURE ~~SHALL BE~~ CONSTRUCTED IN ACCORDANCE WITH THE CITY OF PUYALLUP STANDARD CONSTRUCTION DETAILS. SEE UTILITY DETAILS SHEET FOR MORE INFO.
3. DOWNSPOUTS ~~SHALL BE~~ 8" NYLOPLAST DRAIN BASIN AND INLINE DRAIN OR APPROVED EQUAL.
4. CONNECT DOWNSPOUT DRAIN BASINS TO BELOW GRADE STORM DRAINS PER ARCHITECTURAL PLUMBING PLANS.
5. PROTECT ACTS STORM INLETS, DOWNSPOUTS, AND OPEN PIPE FROM SEDIMENT AND DEBRIS DURING CONSTRUCTION.
6. CONTRACTOR ~~TO~~ SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO CONSTRUCTION.



# 1 STORM UTILITY PLAN DETAIL

 CITY COMMENTS - 07-13-21

- UPDATED STORM UTILITY PLANS TO COORDINATE WITH THE STORMWATER ENGINEER'S DESIGN/CALCULATIONS
- ADDED CoP APPROVAL STAMP

2 CITY & WATER COMMENTS - 11-05-21

- UPDATED STORM UTILITY PLANS TO COORDINATE WITH THE STORMWATER ENGINEER'S DESIGN/CALCULATIONS
- UPDATED THE ESTIMATED STORM QUANTITIES PER THE STORM UPDATE:

APPROVED \_\_\_\_\_

BY \_\_\_\_\_




CITY OF PUYALLUP  
ENGINEERING SERVICES

DATE \_\_\_\_\_

NOTE: THIS APPROVAL IS VOID  
AFTER 1 YEAR FROM APPROVAL  
DATE.

THE CITY WILL NOT BE  
RESPONSIBLE FOR ERRORS  
AND/OR OMISSIONS ON THESE  
PLANS.

FIELD CONDITIONS MAY DICTATE  
CHANGES TO THE PLANS AS  
DETERMINED BY THE ENGINEERING  
SERVICES MANAGER.

Job Number <b>22507</b>	<div><b>Barghausen Consulting Engineers, LLC.</b> 18215 72nd Avenue South Kent, WA 98032 425.251.6222    <a href="http://barghausen.com">barghausen.com</a></div>	Designed <u>DC</u> Drawn <u>DC</u> Checked <u>DD</u> Approved <u>DD</u> Date <u>8/29/25</u>	Scale:  Horizontal 1" = 30"  Vertical N/A	 8/29/25	For:  HERITAGE INN & SUITES OF PUYALLUP, LLC 4500 36TH AVE. S, SUITE 200 FARGO, NE 58104	Title:  STORM UTILITY PLAN - ASBUILT  <b>HOMEWOOD SUITES</b>	<div></div> <table><tr><th>No.</th><th>Date</th><th>By</th><th>Chd.</th><th>DD</th><th>DD</th><th>REVISED PER SITE PLAN CHANGES</th></tr><tr><td></td><td>2/10/25</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td colspan="7">Revision</td></tr></table>	No.	Date	By	Chd.	DD	DD	REVISED PER SITE PLAN CHANGES		2/10/25						Revision						
							No.	Date	By	Chd.	DD	DD	REVISED PER SITE PLAN CHANGES															
	2/10/25																											
Revision																												
Sheet <b>C-4.1 8</b>																												



UTILITY PLAN SCHEDULES - ASBUILT

ST STRUCTURE SCHEDULE	
#/TYPE	DETAILS
CB-#1 TYPE 2 - 48" MH	RIM 421.92 15" POLY (N12) W 411.00 24" POLY (N12) S 410.25 6" SDR 26 E 417.85
CB-#2 TYPE 2 - 48" MH	<del>RIM 421.54</del> 421.53 12" POLY (N12) S <del>413.44</del> 413.43 15" POLY (N12) E <del>413.44</del> 413.43 12" POLY (N12) N <del>413.44</del> 413.43
CB-#3 TYPE 2 - 48" MH	RIM 419.97 419.97 12" POLY (N12) W <del>414.64</del> 414.61 12" POLY (N12) N <del>414.64</del> 414.61
CB-#4 TYPE 1 W/ STD GRATE	RIM <del>418.84</del> 418.96 12" POLY (N12) E <del>414.84</del> 414.96
CB-#5 TYPE 1 W/ STD GRATE	RIM <del>418.65</del> 418.54 12" DIP NE <del>414.24</del> 414.24 12" POLY (N12) S <del>414.24</del> 414.24
CB-#6 TYPE 1 W/ STD GRATE	RIM <del>417.37</del> 417.49 12" DIP SW <del>414.60</del> 414.51 12" DIP NE <del>414.60</del> 414.61
CB-#7 TYPE 1 W/ STD GRATE	RIM <del>417.50</del> 417.45 12" DIP SW <del>414.80</del> 414.75
CB-#8 TYPE 2 - 48" MH	RIM <del>420.06</del> 420.85 6" SDR 26 N <del>416.46</del> 416.35 12" POLY (N12) NE <del>415.00</del> 415.05 24" POLY (N12) S <del>415.00</del> 415.05 4" SDR 26 NW <del>417.82</del> 418.05
CB-#9 48" STORMFILTER CBMH SEE SFMH48 DETAIL	RIM <del>420.04</del> 419.99 12" POLY (N12) SW <del>416.50</del> 416.49
CB-#10 NYLO YI	RIM <del>422.40</del> 422.62 4" SDR 26 W <del>418.30</del> 418.27 6" SDR 26 S <del>418.30</del> 418.27
CB-#11 NYLO YI	RIM 422.58 4" SDR 26 E 418.36 6" SDR 26 S 418.36 6" SDR 26 W 418.36
CB-#12 TYPE 1 W/ STD GRATE	RIM <del>415.70</del> 415.89 12" POLY (N12) NW <del>412.55</del> 412.44
CB-#13 TYPE 2 - 48" MH	RIM <del>415.55</del> 415.57 12" POLY (N12) SE <del>412.31</del> 411.57 12" POLY (N12) SW 411.28 12" POLY (N12) NE 411.28
CB-#14 TYPE 2 - 48" MH	RIM <del>421.41</del> 421.11 18" POLY (N12) W <del>412.66</del> 412.90
CO-#1 8" ST WYE & 8" C.O.	RIM <del>422.18</del> 422.00 8" SDR 26 (SEE PLANS)
CO-#2 8" ST WYE & 8" C.O.	RIM <del>423.33</del> 423.03 8" SDR 26 (SEE PLANS)
CO-#3 8" ST WYE & 8" C.O.	RIM <del>422.87</del> 422.77 8" SDR 26 (SEE PLANS)
CO-#4 8" ST WYE & 8" C.O.	RIM <del>421.39</del> 421.29 8" SDR 26 (SEE PLANS)
ST-#1 72" STORMFILTER MH SEE SFMH72 DETAIL	RIM <del>421.76</del> 421.84 15" POLY (N12) W <del>413.35</del> 413.34 15" POLY (N12) E 411.05
ST-#2 6" ST 45° BEND	6" SDR 26 N 419.12 6" SDR 26 SE 419.12

#/TYPE	DETAILS
ST-#3 4" ST WYE	4" SDR 26 S 418.55 4" SDR 26 N 418.55 4" SDR 26 NE 418.55
ST-#4 4" ST TEE	4" SDR 26 NW 419.11 4" SDR 26 SW 419.11 4" SDR 26 SE <del>419.11</del> 421.90
ST-#5 4" ST INSERTA TEE	4" SDR 26 SW 417.50
ST-#6 4" ST TEE	4" SDR 26 W 418.83 4" SDR 26 E 418.83 4" SDR 26 N 418.83
ST-#7 <del>NEW</del> 6" INSERTA TEE CONTRACTOR TO VERIFY & SET CONN. INV IN THE FIELD (TYP.)	
ST-#8 <del>NEW</del> 6" INSERTA TEE CONTRACTOR TO VERIFY & SET CONN. INV IN THE FIELD (TYP.)	
ST-#9 <del>NEW</del> 6" INSERTA TEE CONTRACTOR TO VERIFY & SET CONN. INV IN THE FIELD (TYP.)	
ST-#10 <del>NEW</del> 6" INSERTA TEE CONTRACTOR TO VERIFY & SET CONN. INV IN THE FIELD (TYP.)	
ST-#11 <del>NEW</del> 6" INSERTA TEE CONTRACTOR TO VERIFY & SET CONN. INV IN THE FIELD (TYP.)	
ST-#12 <del>NEW</del> 6" INSERTA TEE CONTRACTOR TO VERIFY & SET CONN. INV IN THE FIELD (TYP.)	

6" PVC N 414.20  
8" PVC E 412.90  
8" PVC S 412.90

SS STRUCTURE SCHEDULE	
#/DESC.	DETAILS
SS-#1 SAN. 48" MH	RIM <del>419.70</del> 419.97 8" SDR 35 N <del>408.16</del> 408.10 8" SDR 35 W <del>408.06</del> 408.00 <del>8" PVC E 408.10</del>
SS-#2 SAN. 48" MH	RIM <del>418.12</del> 418.29 8" SDR 35 E <del>409.19</del> 409.36 8" SDR 35 S <del>409.09</del> 409.26
SS-#3 SAN. 48" MH	RIM <del>421.04</del> 420.95 8" SDR 35 SE <del>410.12</del> 410.44 8" SDR 35 W <del>410.02</del> 410.34
SS-#4 SAN. 54" DROP MH SEE DETAIL 04.01.02	RIM <del>421.86</del> 421.62 8" SDR 35 NW <del>410.37</del> NW 410.77 8" SDR 35 E <del>410.47</del> E 414.42 (IE DROP) 8" SDR 35 SW <del>412.37</del> E 410.97 (BTM DROP) SW 412.64 (IE DROP) SW 410.97 (BTM DROP)

- CITY COMMENTS - 07-13-21
- UPDATED STORM UTILITY PLANS TO COORDINATE WITH THE STORMWATER ENGINEER'S DESIGN/CALCULATIONS
  - ADDED CoP APPROVAL STAMP

- CITY & WATER COMMENTS - 11-05-21
- UPDATED THE STORM STRUCTURE SCHEDULE PER THE STORM UPDATES

APPROVED

BY \_\_\_\_\_  
CITY OF PUYALLUP  
ENGINEERING SERVICES

DATE \_\_\_\_\_

NOTE: THIS APPROVAL IS VOID  
AFTER 1 YEAR FROM APPROVAL  
DATE.

THE CITY WILL NOT BE  
RESPONSIBLE FOR ERRORS  
AND/OR OMISSIONS ON THESE  
PLANS.

FIELD CONDITIONS MAY DICTATE  
CHANGES TO THE PLANS AS  
DETERMINED BY THE ENGINEERING  
SERVICES MANAGER.

2/10/25

DC

DD

By

Appr.

No.

Date

REVISION PER SITE PLAN CHANGES

Revision

Title:  
UTILITY PLAN SCHEDULES - ASBUILT

For:  
HERITAGE INN & SUITES OF  
PUYALLUP, LLC  
4500 36TH AVE. S, SUITE 200  
FARGO, NE 58104

8/29/25

Scale:

Horizontal  
N/A

Vertical  
N/A

Designed \_\_\_\_\_

Drawn \_\_\_\_\_

Checked \_\_\_\_\_

Approved \_\_\_\_\_

Date 8/29/25

Barghausen

Consulting Engineers, LLC.

18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222

barghausen.com

Job Number

22507

Sheet

C-4.2 8

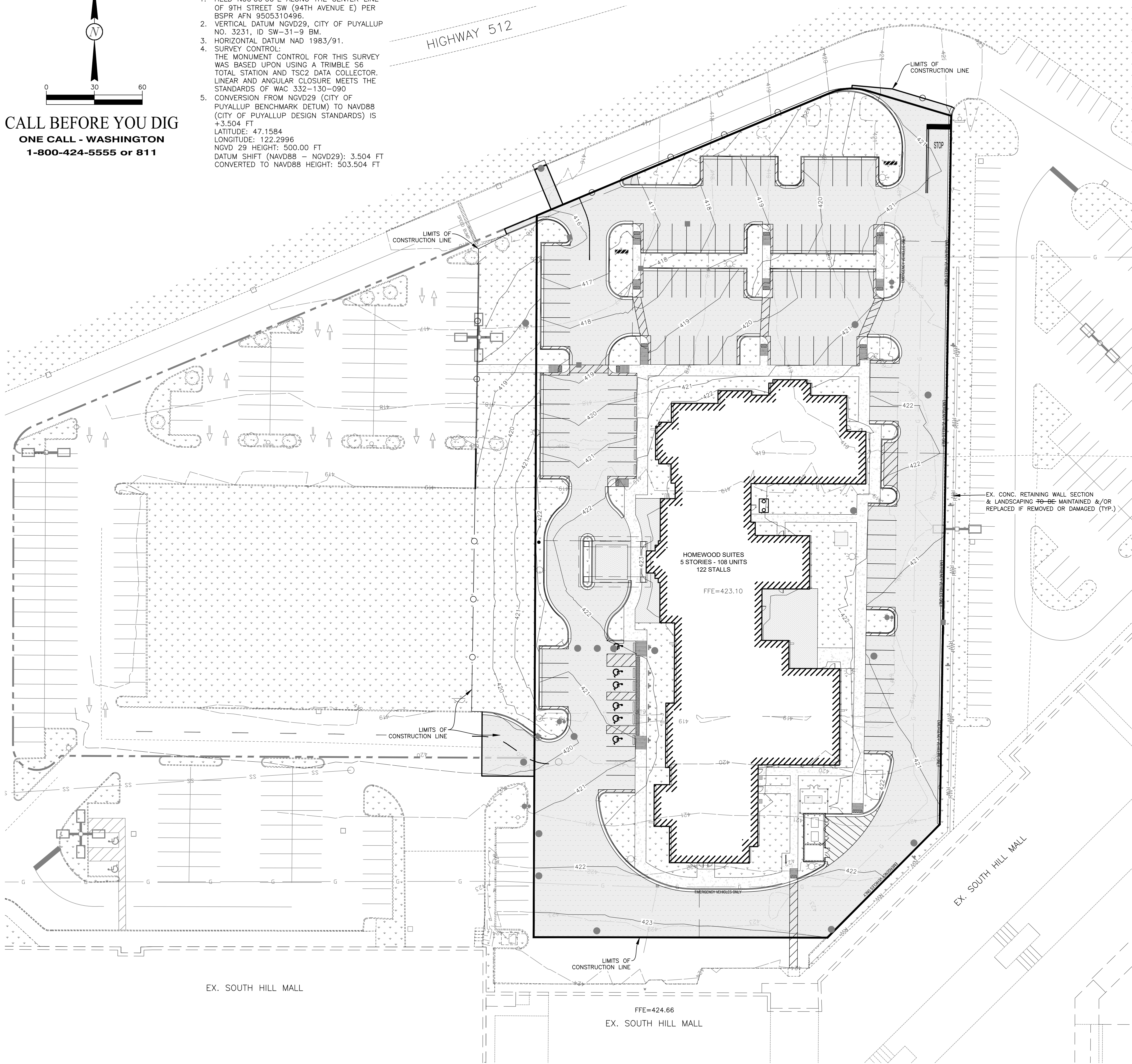
P:\22000s\22507\asbuilt\22507-Onsite.dwg 8/29/2025 3:39 PM ADEHLER



CALL BEFORE YOU DIG  
ONE CALL - WASHINGTON  
1-800-424-5555 or 811

- BASIS OF BEARINGS:
1. HELD 00°00'00"E ALONG THE CENTER LINE OF 9TH STREET SW (94TH AVENUE E) PER BSPR AFN 9505310496.
  2. VERTICAL DATUM NGVD29, CITY OF PUYALLUP NO. 3231, ID SW-31-9 BM.
  3. HORIZONTAL DATUM NAD 1983/91.
  4. SURVEY CONTROL:  
THE MONUMENT CONTROL FOR THIS SURVEY WAS BASED UPON USING A TRIMBLE S6 TOTAL STATION AND TSC2 DATA COLLECTOR. LINEAR AND ANGULAR CLOSURE MEETS THE STANDARDS OF WAC 332-130-090
  5. CONVERSION FROM NGVD29 (CITY OF PUYALLUP BENCHMARK DETUM) TO NAVD88 (CITY OF PUYALLUP DESIGN STANDARDS) IS +3.504 FT  
LATITUDE: 47.1584  
LONGITUDE: 122.2996  
NGVD 29 HEIGHT: 500.00 FT  
DATUM SHIFT (NAVD88 - NGVD29): 3.504 FT  
CONVERTED TO NAVD88 HEIGHT: 503.504 FT

OVERALL SITE GRADING PLAN - ASBUILT



ONSITE ESTIMATED GRADING QUANTITIES		
ITEM	QUANTITY	UNIT
IMPORT	18,386	CY
AGGREGATE BASE COURSE	1,550	CY
SUBGRADE PREP	13,940	SY
THICKENED EDGE CONCRETE	772	LF
24" CURB	2,626	LF
NEW 4" CONCRETE SIDEWALK	1,013	SY
NEW 4" DECORATIVE STAMPED CONCRETE	259	SY
NEW 6" CONCRETE PAVEMENT	80	SY
ADA DOME PANELS	214	SF
NEW 3" ASPHALT PAVEMENT	6,737	SY
PAVEMENT MARKING - STRIPING	3,762	LF
PAVEMENT MARKING - ADA SYMBOL	6	EA

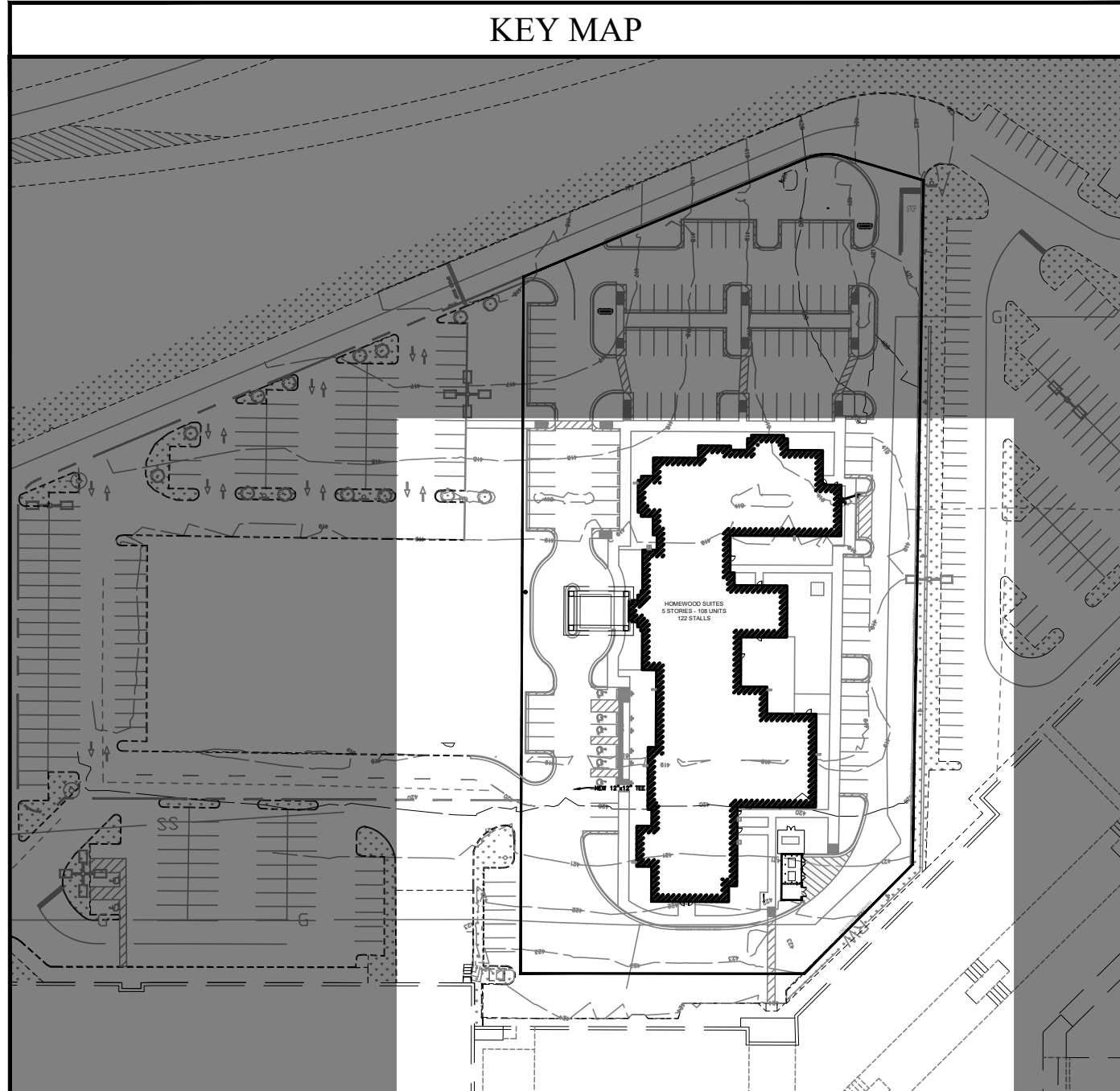
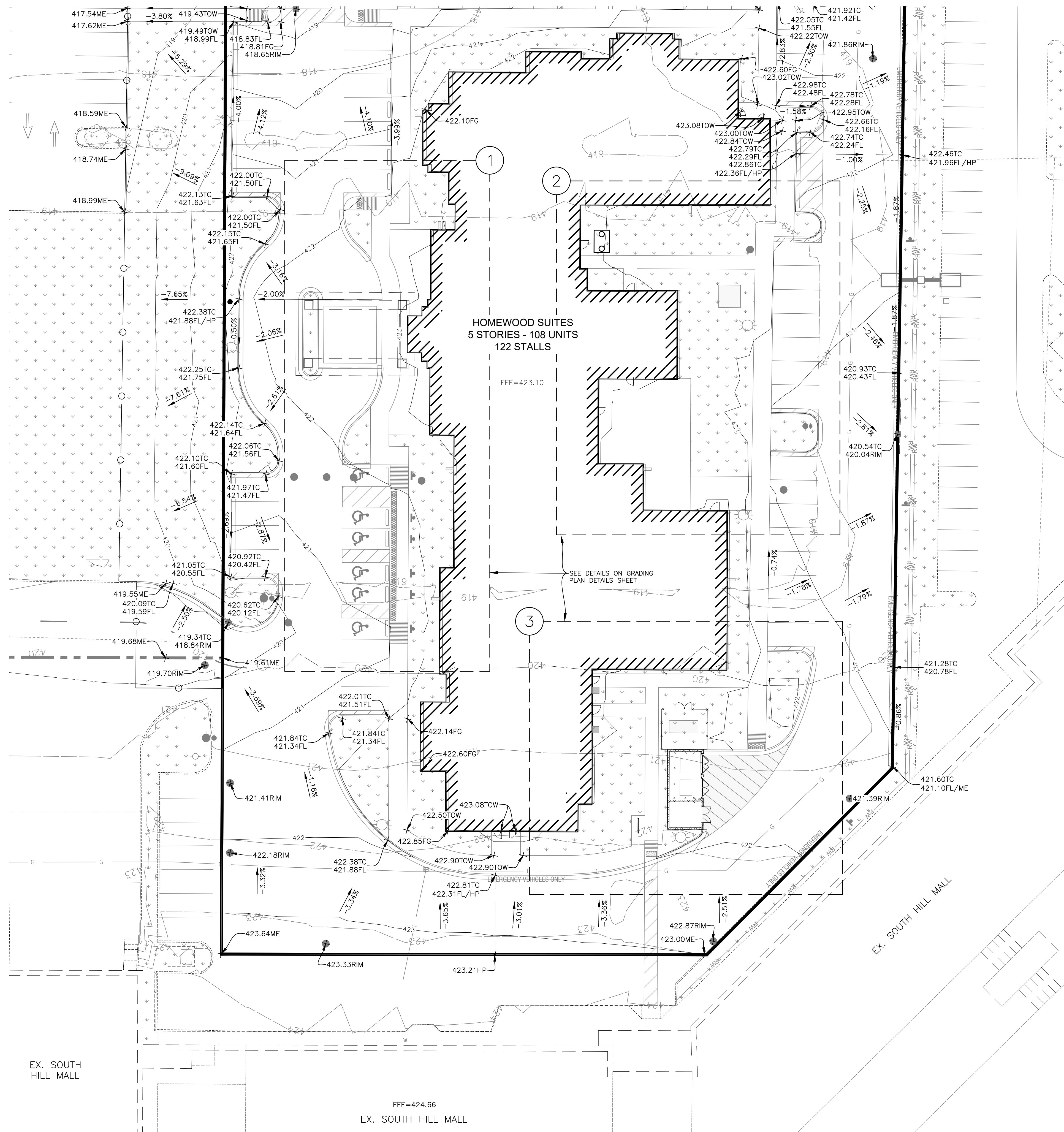
- NOTES:
1. ELEVATIONS ARE FLOWLINE ELEVATIONS UNLESS OTHERWISE NOTED.
  2. 2' OF STRIPPING WAS ASSUMED TO ALLOW FOR CLEARING OF EXISTING 5" ASPHALT & 1.5' GRAVEL FROM THE SITE.
  3. FILL WITHIN THE BUILDING FOOTPRINT(S) WAS EXCLUDED. SEE STRUCTURAL AND ARCHITECTURAL FOR FILL REQUIREMENTS.
  4. NO COMPACTION WAS ASSUMED IN THE QUANTITY FOR AGGREGATE BASE.
  5. A FILL FACTOR OF 1.3 WAS ASSUMED FOR THE COMMON EXCAVATION & EXPORT QUANTITY.
  6. ALL GRADES SHOWN ARE FINISH SURFACE GRADES. ANY LANDSCAPE ROCK IS TO BE PLACED ABOVE THE FINISHED GRADE SURFACE. RIP-RAP PROTECTION IS TO BE PLACED BELOW THE FINISHED GRADE SURFACE.
  7. PAVEMENT MARKINGS QUANTITIES SHOWN ARE FOR NEW STALLS ONLY.
  8. NEW ADA DOME PANEL SHALL BE 2' WIDE.
  9. CONTRACTOR SHALL MATCH EXISTING CURB CROSS SECTION IN CLACKAMAS TOWN CENTER MALL'S PRIVATE ROADWAY.
  10. CONTRACTOR SHALL COORDINATE PATTERN AND COLOR FOR STAMPED COLORED CONCRETE AT MAIN ENTRANCE WITH OWNER.

- 4" CONCRETE SIDEWALK
- 3" ASPHALT PAVEMENT
- 6" CONCRETE PAVEMENT
- PAVER PATIO OR DECORATIVE CONCRETE
- NEW CURB (IN-FLOW)
- NEW CURB (OUT-FLOW)
- GRADE BREAK: HIGH POINT

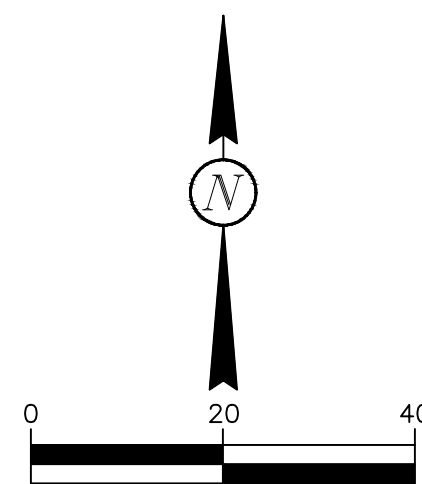
Job Number 22507		Sheet C-5 of 8	
Title: OVERALL SITE GRADING PLAN - ASBUILT		For: HERITAGE INN & SUITES OF PUYALLUP, LLC 4500 36TH AVE. S, SUITE 200 FARGO, NE 58104	
APPROVED BY: CITY OF PUYALLUP ENGINEERING SERVICES DATE: NOTE: THIS APPROVAL IS VOID AFTER 1 YEAR FROM APPROVAL DATE. THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THE PLANS AS DETERMINED BY THE ENGINEERING SERVICES MANAGER.		Scale: Horizontal 1"=30' Vertical N/A Designed DC Drawn DC Checked DD Approved DD Date 8/29/25	
Barghausen Consulting Engineers, LLC. 18215 72nd Avenue South Kent, WA 98032 425.251.6222 barghausen.com		Professional Engineer DON E. DAWES STATE OF WASHINGTON LICENSED 2009 8/29/25	



# SOUTHERN GRADING PLAN - ASBUILT



	NEW CURB
	GRADE BREAK: HIGH POINT
FFE	FINISHED FLOOR ELEVATION
FG	FINISH GROUND
FL	FLOWLINE
HP	HIGH POINT
INV	STRUCTURE INVERT ELEVATION
LP	LOW POINT
ME	MATCH EXISTING GROUND
RIM	STRUCTURE RIM ELEVATION
TC	TOP OF CURB
TOC	TOP OF CONCRETE
TW	TOP OF WALK



**CALL BEFORE YOU DIG**  
**ONE CALL - WASHINGTON**  
**1-800-424-5555 or 811**

- BASIS OF BEARINGS:**
1. HELD N00°00'00"E ALONG THE CENTER LINE OF 9TH STREET SW (94TH AVENUE E) PER BPSRP AFN 9505310496.
  2. VERTICAL DATUM NGVD29, CITY OF PUYALLUP NO. 3231, ID SW-31-9 BM.
  3. HORIZONTAL DATUM NAD 1983/91.
  4. SURVEY CONTROL:  
THE MONUMENT CONTROL FOR THIS SURVEY IS BASED UPON USING A TRIMBLE 56 TOTAL STATION AND TSC2 DATA COLLECTOR. LINEAR AND ANGULAR CLOSURE MEETS THE STANDARDS OF WAC 332-130-090
  5. CONVERSION FROM NGVD29 (CITY OF PUYALLUP BENCHMARK DETUM) TO NAVD88 (CITY OF PUYALLUP DESIGN STANDARDS) IS +3.504 FT  
LATITUDE: 47.1584  
LONGITUDE: 122.2996  
NGVD 29 HEIGHT: 500.00 FT  
DATUM SHIFT (NAVD88 - NGVD29): 3.504 FT  
CONVERTED TO NAVD88 HEIGHT: 503.504 FT

APPROVED \_\_\_\_\_

BY \_\_\_\_\_

CITY OF PUYALLUP  
ENGINEERING SERVICES

DATE \_\_\_\_\_

NOTE: THIS APPROVAL IS VOID  
AFTER 1 YEAR FROM APPROVAL  
DATE.

THE CITY WILL NOT BE  
RESPONSIBLE FOR ERRORS  
AND/OR OMISSIONS ON THESE  
PLANS.

FIELD CONDITIONS MAY DICTATE  
CHANGES TO THE PLANS AS  
DETERMINED BY THE ENGINEERING  
SERVICES MANAGER.

△	2/10/25	DC	DD	DD	REVISED PER SITE PLAN CHANGES
No.	Date	By	Ckd.	Appr.	Revision

Title: SOUTHERN GRADING PLAN - ASBUILT

***HOMEWOOD SUITES***

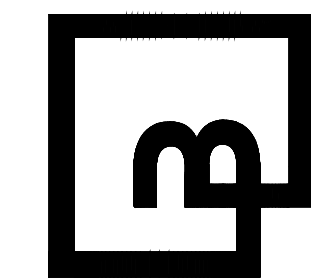
HERITAGE INN & SUITES OF  
PUYALLUP, LLC  
4500 36TH AVE. S, SUITE 200  
FARGO, NE 58104



Scale:  
Horizontal  
1"=20'  
Vertical  
N/A

Designed DC  
 Drawn DC  
 Checked DD  
 Approved DD  
 Date: 8/20/25

**Barghausen  
Consulting Engineers, LLC.**  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222 **barghausen.com**



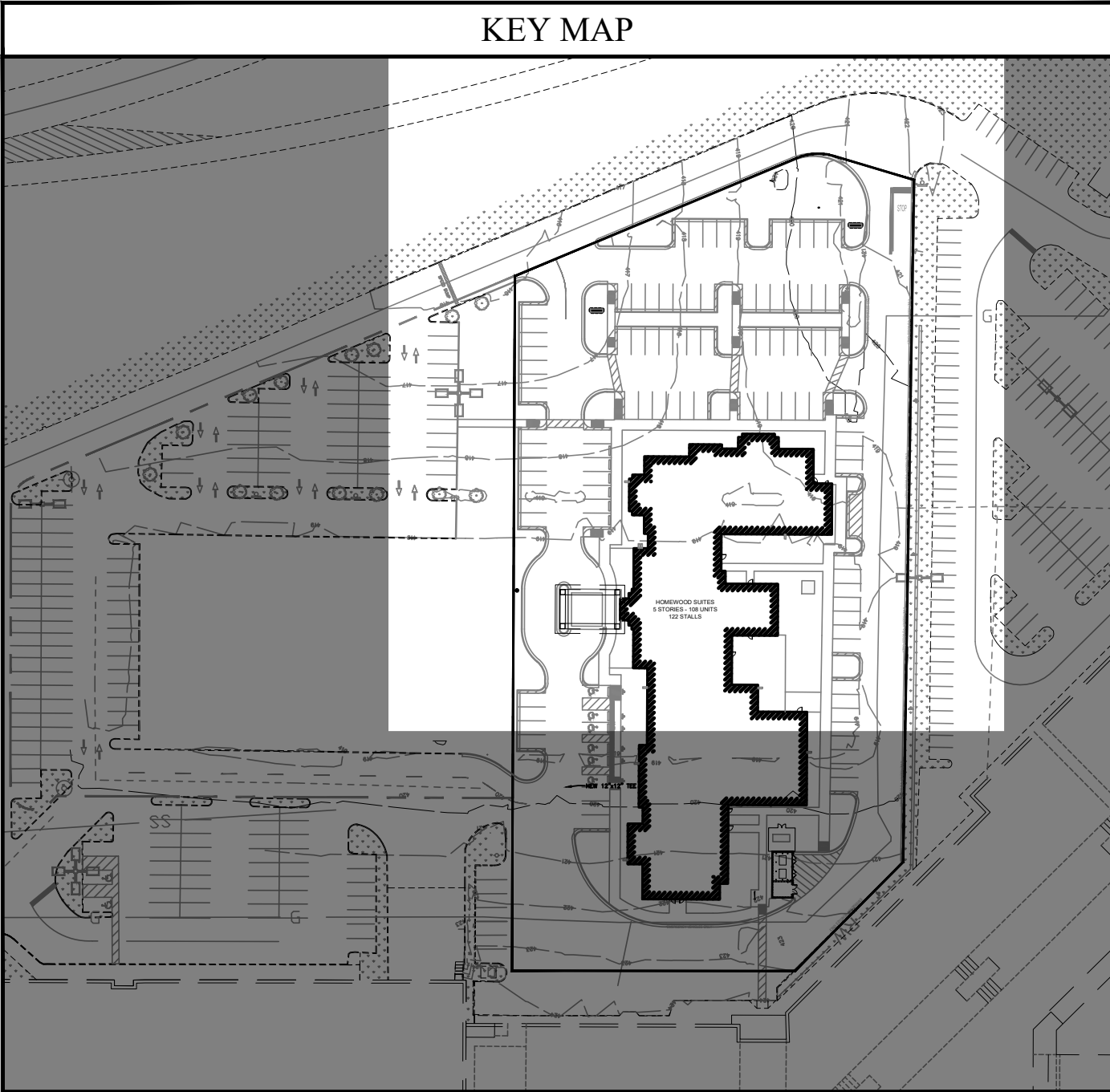
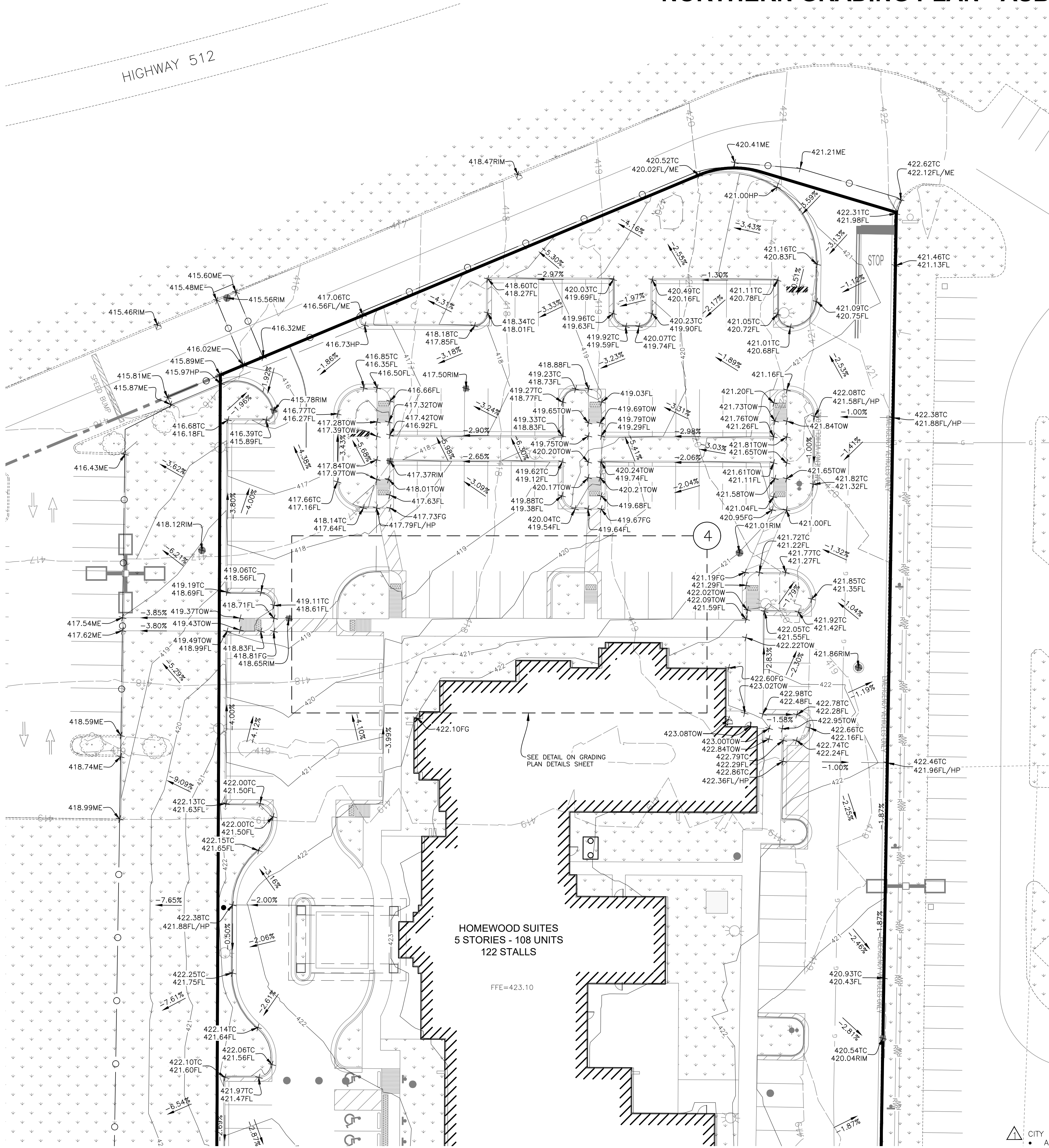
Job Number  
22507

---

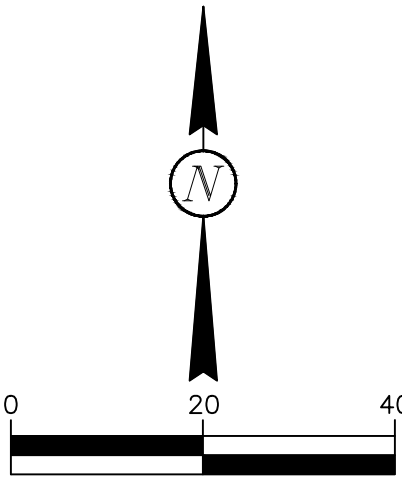
Sheet



NORTHERN GRADING PLAN - ASBUILT



FFC	NEW CURB
FG	GRADE BREAK: HIGH POINT
FL	FINISHED FLOOR ELEVATION
HP	FLOWLINE
INV	HIGH POINT
LP	STRUCTURE INVERT ELEVATION
ME	LOW POINT
RIM	MATCH EXISTING GROUND
TC	STRUCTURE RIM ELEVATION
TOC	TOP OF CURB
TW	TOP OF CONCRETE
	TOP OF WALK



CALL BEFORE YOU DIG  
ONE CALL - WASHINGTON  
1-800-424-5555 or 811

- BASIS OF BEARINGS:**
1. HELD N00°00'00"E ALONG THE CENTER LINE OF 9TH STREET SW (94TH AVENUE E) PER BSMR APN 9505310496.
  2. VERTICAL DATUM NGVD29, CITY OF PUYALLUP NO. 3231, ID SW-31-9 BM.
  3. HORIZONTAL DATUM NAD 1983/91.
  4. SURVEY CONTROL: THE MONUMENT CONTROL FOR THIS SURVEY WAS BASED UPON USING A TRIMBLE S6 TOTAL STATION AND TSC2 DATA COLLECTOR. LINEAR AND ANGULAR CLOSURE MEETS THE STANDARDS OF WAC 332-130-090.
  5. CONVERSION FROM NGVD29 (CITY OF PUYALLUP BENCHMARK DETUM) TO NAVD88 (CITY OF PUYALLUP DESIGN STANDARDS) IS +3.504 FT  
LATITUDE: 47.1584  
LONGITUDE: 122.2996  
NGVD 29 HEIGHT: 500.00 FT  
DATUM SHIFT (NAVD88 - NGVD29): 3.504 FT  
CONVERTED TO NAVD88 HEIGHT: 503.504 FT

APPROVED

BY: \_\_\_\_\_  
CITY OF PUYALLUP  
ENGINEERING SERVICES

DATE: \_\_\_\_\_

NOTE: THIS APPROVAL IS VOID AFTER 1 YEAR FROM APPROVAL DATE.

THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS.

FIELD CONDITIONS MAY DICTATE CHANGES TO THE PLANS AS DETERMINED BY THE ENGINEERING SERVICES MANAGER.

No.	Date	By	Ckd.	Appr.	Revision
1	2/13/25	DC	DD	DD	REVISED PER SITE PLAN CHANGES

Title: NORTHERN GRADING PLAN - ASBUILT

**HOMEWOOD SUITES**

For: HERITAGE INN & SUITES OF PUYALLUP, LLC  
4500 36TH AVE. S, SUITE 200  
FARGO, NE 58104

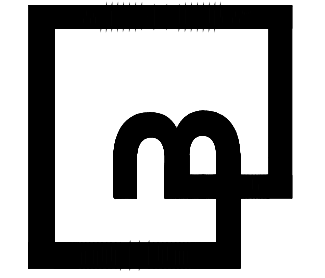
Scale:



Scale: Horizontal 1"=20' Vertical N/A

Designed	DC	Drawn	DC	Checked	DD	Approved	DD	Date	8/29/25
----------	----	-------	----	---------	----	----------	----	------	---------

**Barghausen Consulting Engineers, LLC.**  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222 [barghausen.com](http://barghausen.com)

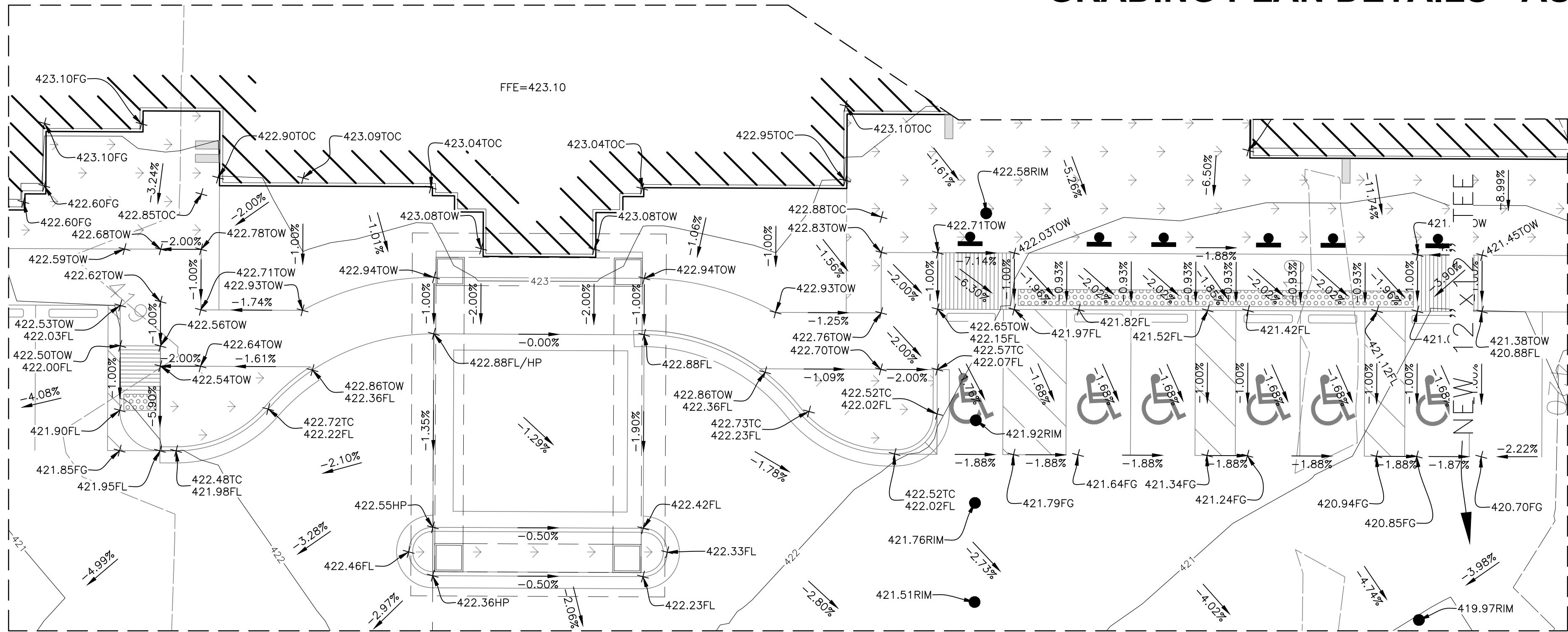


Job Number 22507  
Sheet C-5.2 of 8

△ CITY COMMENTS - 07-13-21  
• ADDED CoP APPROVAL STAMP

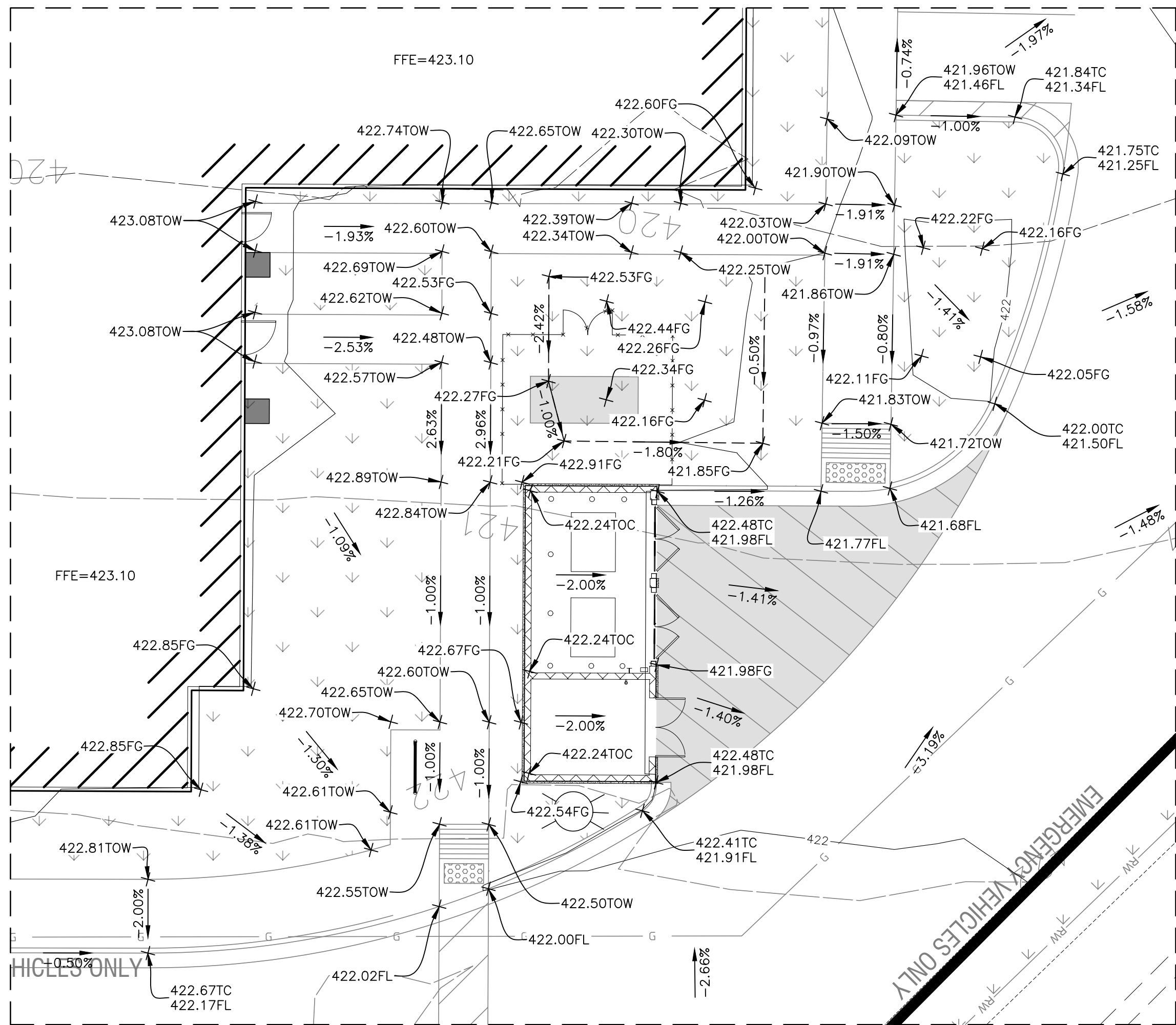


GRADING PLAN DETAILS - ASBUILT



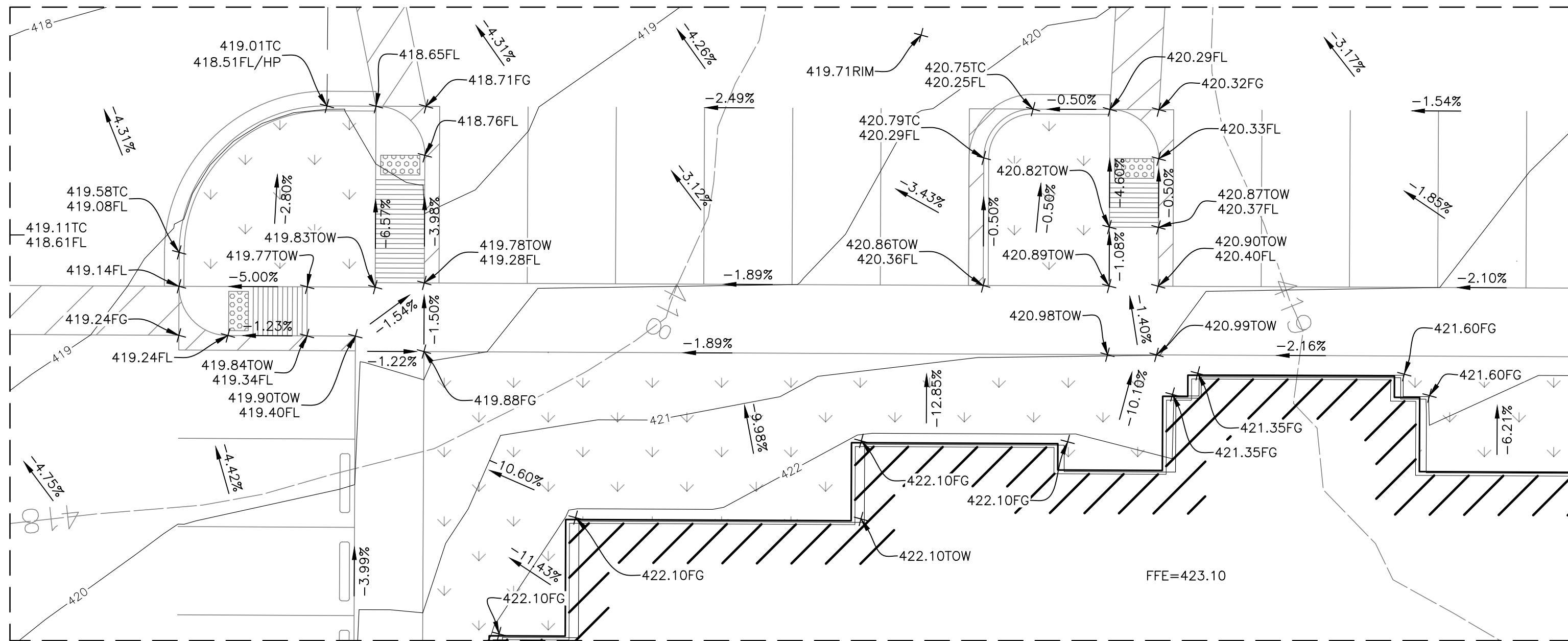
1 GRADING PLAN DETAIL

SCALE: 1"=10'



3 GRADING PLAN DETAIL

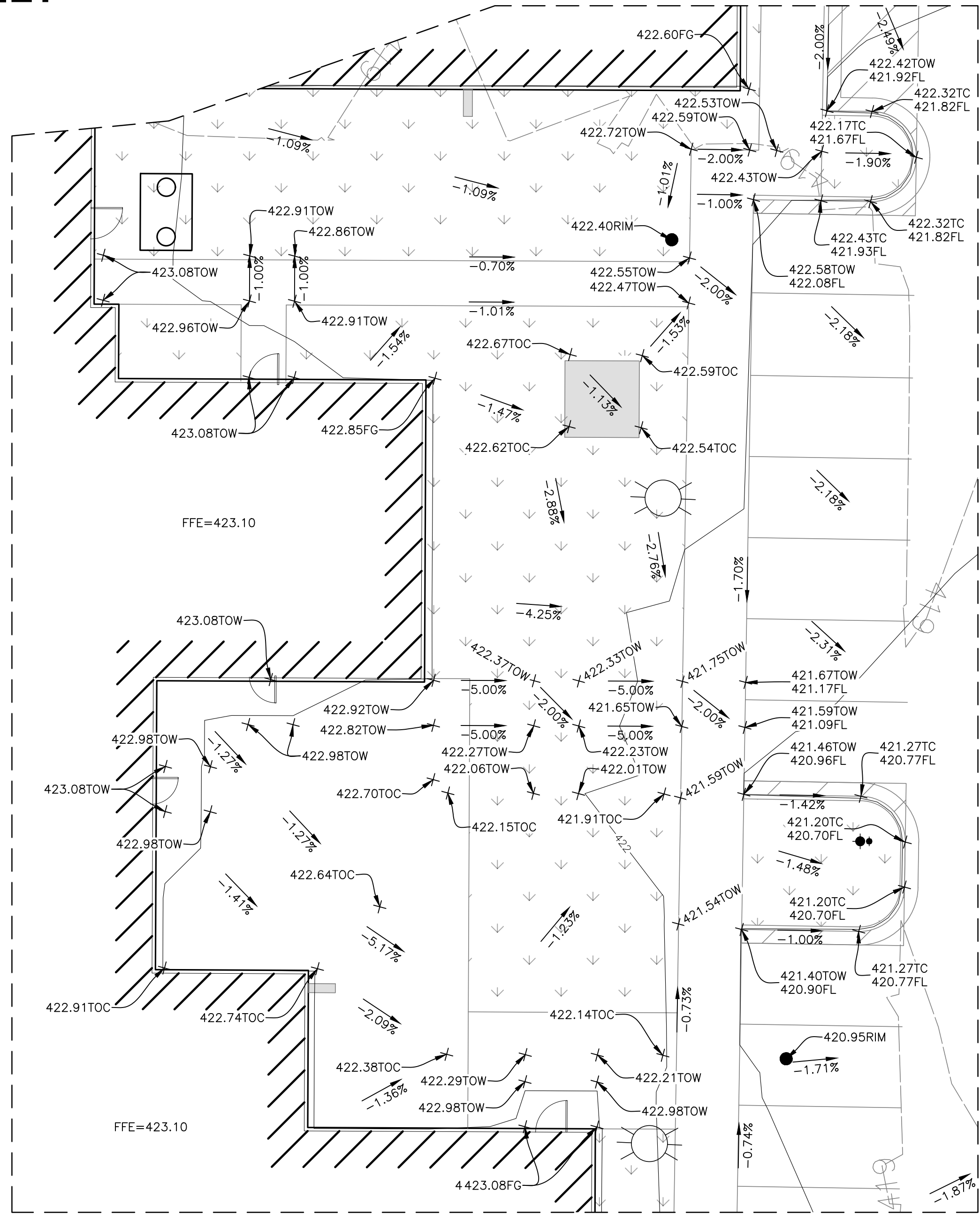
SCALE: 1"=10'



4 GRADING PLAN DETAIL

SCALE: 1"=10'

- NEW CURB  
GRADE BREAK: HIGH POINT  
FINISHED FLOOR ELEVATION  
FINISH GROUND  
FLOWLINE  
HIGH POINT  
STRUCTURE INVERT ELEVATION  
LOW POINT  
MATCH EXISTING GROUND  
STRUCTURE RIM ELEVATION  
TOP OF CURB  
TOP OF CONCRETE  
TOP OF WALK



2 GRADING PLAN DETAIL

SCALE: 1"=10'

APPROVED  
BY: CITY OF PUYALLUP  
ENGINEERING SERVICES  
DATE: \_\_\_\_\_  
NOTE: THIS APPROVAL IS VOID  
AFTER 1 YEAR FROM APPROVAL  
DATE.  
THE CITY WILL NOT BE  
RESPONSIBLE FOR ERRORS  
AND/OR OMISSIONS ON THESE  
PLANS.  
FIELD CONDITIONS MAY DICTATE  
CHANGES TO THE PLANS AS  
DETERMINED BY THE ENGINEERING  
SERVICES MANAGER.

No.	Date	By	Ckd.	Appr.	Revision
2/10/25					

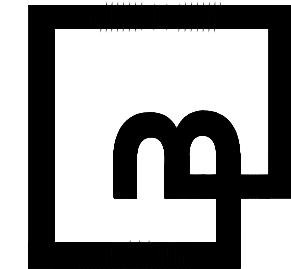
Title: GRADING PLAN DETAILS - ASBUILT

For: HERITAGE INN & SUITES OF  
PUYALLUP, LLC  
4500 36TH AVE. S, SUITE 200  
FARGO, NE 58104



Scale:	Horizontal	Vertical
Designed	DC	DC
Drawn	DC	DC
Checked	DD	DD
Approved	DD	DD
Date	8/29/25	N/A

Barghausen  
Consulting Engineers, LLC.  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222  
barghausen.com



Job Number  
22507  
Sheet  
C-5.3 8

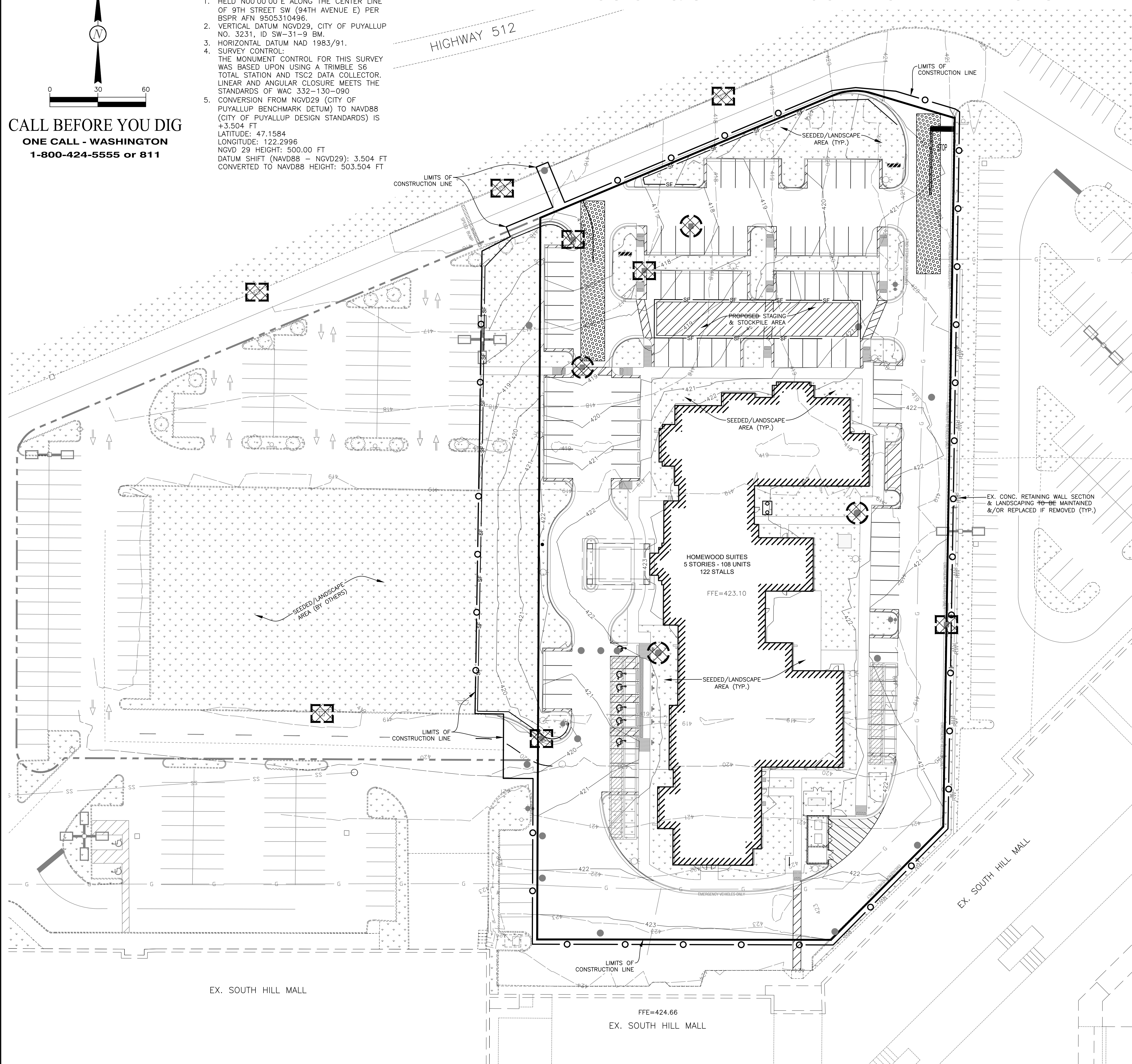



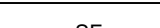


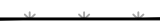



**BASIS OF BEARINGS:**

1. HELD N00°00'00"E ALONG THE CENTER LINE OF 9TH STREET SW (94TH AVENUE E) PER BSPR AFN 9505310496.
2. VERTICAL DATUM NGVD29, CITY OF PUYALLUP NO. 3231, ID SW—31—9 N.M.
3. HORIZONTAL DATUM NAD 1983/91.
4. SURVEY CONTROL:  
THE MONUMENT CONTROL FOR THIS SURVEY IS BASED UPON USING A TRIMBLE 56 TOTAL STATION AND TSC2 DATA COLLECTOR. LINEAR AND ANGULAR CLOSURE MEETS THE STANDARDS OF WAC 332-130-090
5. CONVERSION FROM NGVD29 (CITY OF PUYALLUP BENCHMARK DETUM) TO NAVD88 (CITY OF PUYALLUP DESIGN STANDARDS) IS +3.504 FT  
LATITUDE: 47.1584  
LONGITUDE: 122.2996  
NGVD 29 HEIGHT: 500.00 FT  
DATUM SHIFT (NAVD88 - NGVD29): 3.504 FT  
CONVERTED TO NAVD88 HEIGHT: 503.504 FT

HIGHWAY 512



EROSION CONTROL LEGEND			
	LIMITS OF CONSTRUCTION	3.16	AC
	SILT FENCE	623	LF
	SEEDING & HYDROMULCH	3,757	SY
	CURB INLET PROTECTION	8	EA
	STANDARD INLET PROTECTION	4	EA
	STABILIZED CONSTRUCTION ENTRANCE	2	EA





NOTES:

1. CONTRACTOR ~~SHALL~~ FOLLOW CITY OF PUYALLUP AND DEPARTMENT OF ECOLOGY STORMWATER POLLUTION PREVENTION STANDARDS FOR ALL EROSION CONTROL DURING CONSTRUCTION.
2. SILT FENCE ~~SHALL BE~~ INSTALLED PER DEPARTMENT OF ECOLOGY DETAIL SHOWN ON THE EROSION & SEDIMENT CONTROL PLAN SHEET C-6.1.
3. INLET PROTECTION ~~SHALL BE~~ INSTALLED PER DEPARTMENT OF ECOLOGY DETAILS SHOWN ON THE EROSION & SEDIMENT CONTROL PLAN DETAILS SHEET C-6.1.
4. CONTRACTOR ~~SHALL~~ PROVIDE APPROVED CONCRETE WASHOUT PER DEPARTMENT OF ECOLOGY DETAIL SHOWN ON THE EROSION & SEDIMENT CONTROL PLAN DETAILS SHEET C-6.1.
5. REFER TO LANDSCAPE PLAN FOR PERMANENT STABILIZATION AND SEEDING DETAILS.

CONSTRUCTION SEQUENCE:

ALL EROSION CONTROL SCHEDULES INCLUDE A "CONSTRUCTION SEQUENCE" SCHEDULE WHICH OUTLINES THE PROPER SEQUENCE AND MAINTENANCE REQUIREMENTS FOR ESC IN CONJUNCTION WITH THE CONSTRUCTION OF THE PROJECT. THE FOLLOWING "CONSTRUCTION SEQUENCE" IS ~~TO BE~~ USED AS A GUIDE, ALTHOUGH EACH INDIVIDUAL PROJECT IS UNIQUE AND WILL REQUIRE ITS OWN "CONSTRUCTION SEQUENCE" SCHEDULE:

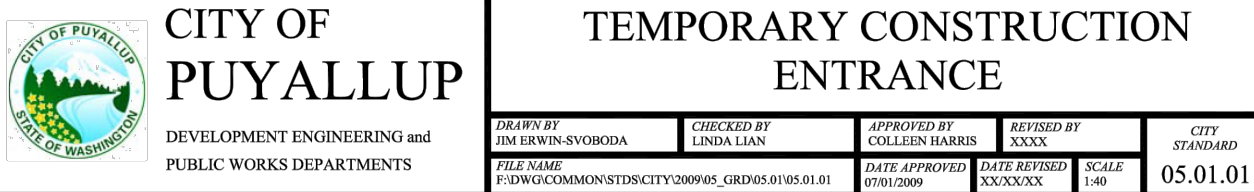
1. ~~HOLD A~~ PRE-CONSTRUCTION MEETING WITH THE CITY AND OBTAIN REQUIRED PERMITS.
2. ~~START~~ CLEARING AND GRADING LIMITS.
3. ~~CONSTRUCT~~ TEMPORARY CONSTRUCTION ENTRANCE.
4. ~~CONSTRUCT~~ PERIMETER DITCHES, SILT FENCES, AND OTHER EROSION CONTROL DEVICES AS SHOWN.
5. ~~CONSTRUCT~~ PROTECTION DEVICES FOR CRITICAL AREAS AND SIGNIFICANT TREES PROPOSED FOR RETENTION.
6. ~~SCHEDULE AN~~ EROSION CONTROL INSPECTION WITH THE CITY.
7. ~~CONSTRUCT~~ STORM DRAINAGE RETENTION/DETENTION (CONTROL AND STORAGE) FACILITIES. ~~PROVIDE~~ EMERGENCY OVERTLOW AS APPLICABLE.
8. ~~ALL~~ DITCHES AND SWALES AS SHOWN ~~SHALL BE~~ PROVIDED TO DIRECT ALL SURFACE WATER TO THE RETENTION/DETENTION AND SEDIMENTATION POND AS CLEARING AND GRADING PROGRESSES. NO UNCONTROLLED SURFACE WATER ~~SHALL BE~~ ALLOWED TO LEAVE THE SITE OR ~~BE~~ DISCHARGED TO A CRITICAL AREA AT ANY TIME DURING THE GRADING OPERATIONS.
9. CLEARLY STATE AT WHAT POINT GRADING ACTIVITIES CAN BEGIN, USUALLY ONLY AFTER ALL DRAINAGE AND EROSION CONTROL MEASURES ARE IN PLACE.
10. IDENTIFY EROSION CONTROL MEASURES WHICH REQUIRE REGULAR MAINTENANCE.

Job Number  22507	<div><div></div><div><div>Barghausen Consulting Engineers, LLC.</div><div>18215 72nd Avenue South Kent, WA 98032 425-251.6222    <b>barghausen.com</b></div></div></div>	Designed <u>DC</u> Drawn <u>DC</u> Checked <u>DD</u> Approved <u>DD</u> Date <u>8/29/25</u>	Scale:  Horizontal 1" = 30'  Vertical N/A	<div> 8/29/25</div>	For:  HERITAGE INN & SUITES OF PUYALLUP, LLC 4500 36TH AVE. S, SUITE 200 FARGO, NE 58104	Title:  EROSION & SEDIMENT CONTROL PLAN - ASBUILT  <b>HOMENEWOOD SUITES</b>	<table><tr><th></th><th>No.</th><th>Date</th><th>By</th><th>Cd.</th><th>DD</th><th>Appr.</th><th>Revision</th></tr><tr><td></td><td></td><td>2/10/25</td><td>DC</td><td></td><td>DD</td><td></td><td>REVISED PER SITE PLAN CHANGES</td></tr></table>		No.	Date	By	Cd.	DD	Appr.	Revision			2/10/25	DC		DD		REVISED PER SITE PLAN CHANGES
			No.	Date	By			Cd.	DD	Appr.	Revision												
		2/10/25	DC		DD		REVISED PER SITE PLAN CHANGES																
Sheet  C-6 of 8																							

P:\22000s\22507\asbuil\22507-Onsite.dwg 8/29/2025 3:39 PM AOEHLER



1. GEOTEXTILE MIRAFI 500 X OR APPROVED EQUAL SHALL BE PLACED UNDER THE ENTIRETY OF THE TEMPORARY ENTRANCE.
2. ADDITIONAL ROCK SHALL BE ADDED PERIODICALLY TO MAINTAIN PROPER FUNCTION OF THE PAD.
3. IF THE PAD DOES NOT ADEQUATELY REMOVE THE MUD FROM THE VEHICLE'S WHEELS, THE WHEELS SHALL BE HOSED OFF BEFORE THE VEHICLE ENTERS A PAVED STREET. THE WASHING SHALL BE DONE ON AN AREA COVERED WITH CRUSHED ROCK AND WASH WATER SHALL DRAIN TO A SEDIMENT RETENTION FENCE OR THROUGH A SILT FENCE.



2. ALL REQUIRED SEDIMENTATION AND EROSION CONTROL FACILITIES SHALL BE CONSTRUCTED AND IN OPERATION PRIOR TO ANY LAND CLEARING AND/OR OTHER CONSTRUCTION TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER THE NATURAL DRAINAGE SYSTEM. THE CONTRACTOR SHALL SCHEDULE AN INSPECTION OF THE EROSION CONTROL FACILITIES PRIOR TO ANY LAND CLEARING AND/OR CONSTRUCTION. ALL EROSION AND SEDIMENT FACILITIES SHALL BE MAINTAINED IN A SATISFACTORY CONDITION AS DETERMINED BY THE CITY, UNTIL SUCH TIME THAT CLEARING AND/OR CONSTRUCTION IS COMPLETED AND THE POTENTIAL FOR ON-SITE EROSION HAS PASSED. THE IMPLEMENTATION, MAINTENANCE, REPLACEMENT, AND ADDITIONS TO THE EROSION AND SEDIMENTATION CONTROL SYSTEMS SHALL BE THE RESPONSIBILITY OF THE PERMITEE.

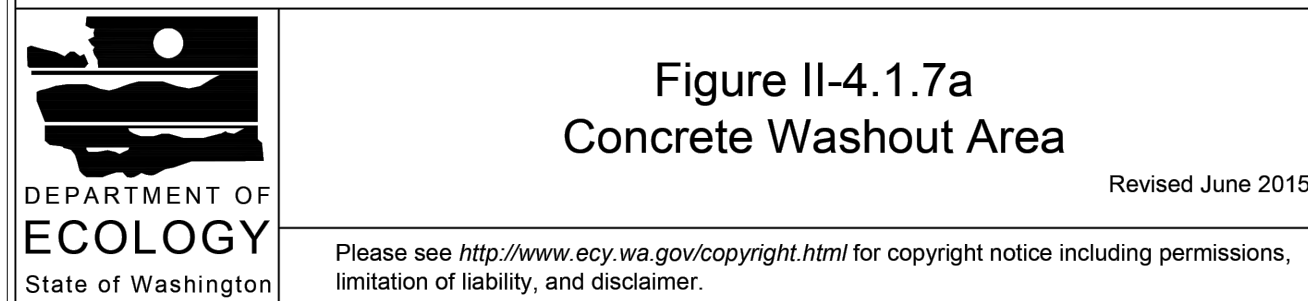
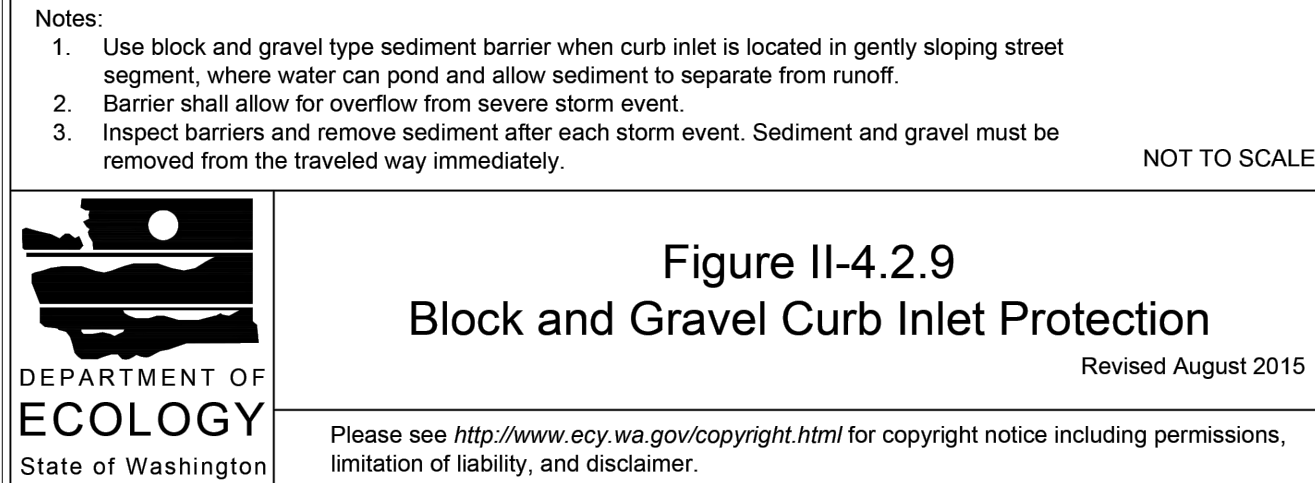
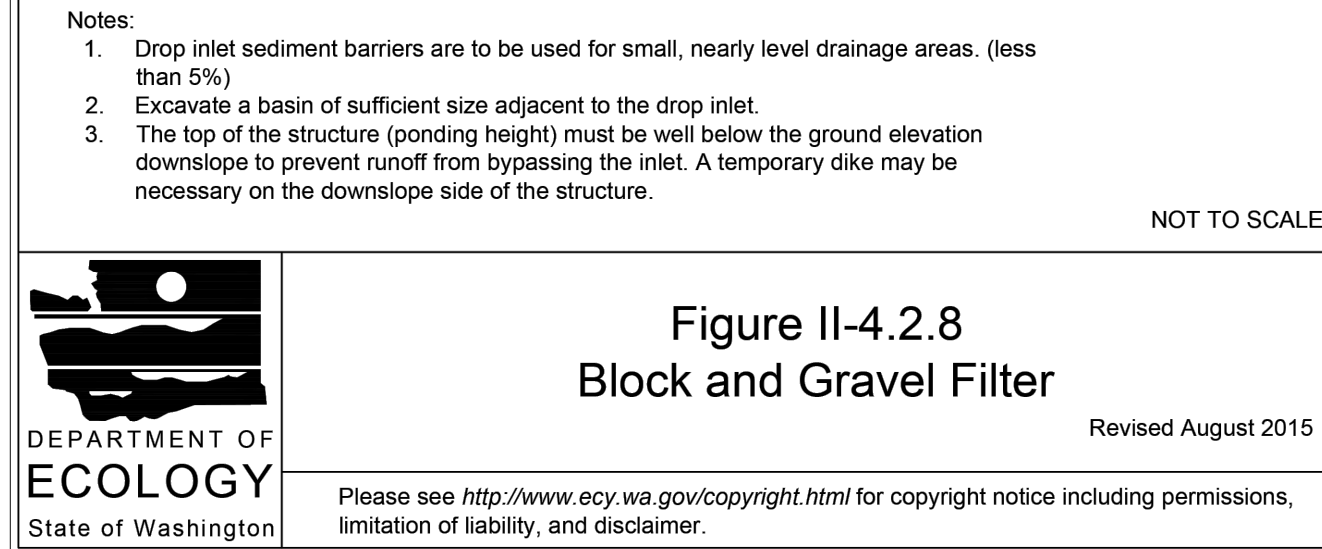
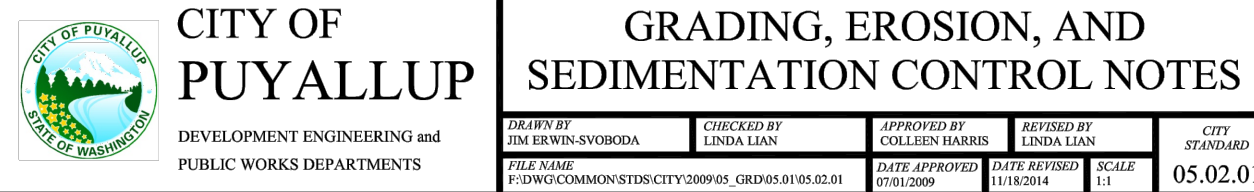
3. THE EROSION AND SEDIMENTATION CONTROL SYSTEM FACILITIES DEPICTED ON THESE PLANS ARE INTENDED TO BE MINIMUM REQUIREMENTS TO MEET ANTICIPATED SITE CONDITIONS. AS CONSTRUCTION PROGRESSES AND UNEXPECTED OR SEASONAL CONDITIONS DICTATE, FACILITIES WILL BE NECESSARY TO ENSURE COMPLETE SILTATION CONTROL ON THE SITE. DURING THE COURSE OF CONSTRUCTION, IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE PERMITTEE TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY HIS ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES, OVER AND ABOVE THE MINIMUM REQUIREMENTS, AS MAY BE NEEDED TO PROTECT ADJACENT PROPERTIES, SENSITIVE AREAS, NATURAL WATER COURSES, AND/OR STORM DRAINAGE SYSTEMS.

4. APPROVAL OF THESE PLANS IS FOR GRADING, TEMPORARY DRAINAGE, EROSION AND SEDIMENTATION CONTROL ONLY. IT DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT STORM DRAINAGE DESIGN, SIZE OR LOCATION OF PIPES, RESTRICTORS, CHANNELS, OR RETENTION FACILITIES.

5. ANY DISTURBED AREA WHICH HAS BEEN STRIPPED OF VEGETATION AND WHERE NO FURTHER WORK IS ANTICIPATED FOR A PERIOD OF 30 DAYS OR MORE, MUST BE IMMEDIATELY STABILIZED WITH MULCHING, GRASS PLANTING, OR OTHER APPROVED EROSION CONTROL TREATMENT APPLICABLE TO THE TIME OF YEAR IN QUESTION. GRASS SEEDING ALONE WILL BE ACCEPTABLE ONLY DURING THE MONTHS OF APRIL THROUGH SEPTEMBER INCLUSIVE. SEEDING MAY PROCEED OUTSIDE THE SPECIFIED TIME PERIOD WHENEVER IT IS IN THE INTEREST OF THE PERMITEE BUT MUST BE AUGMENTED WITH MULCHING, NETTING, OR OTHER TREATMENT APPROVED BY THE CITY.

6. IN CASE EROSION OR SEDIMENTATION OCCURS TO ADJACENT PROPERTIES, ALL CONSTRUCTION WORK WITHIN THE DEVELOPMENT THAT WILL FURTHER AGGRAVATE THE SITUATION MUST CEASE, AND THE OWNER/CONTRACTOR WILL IMMEDIATELY COMMENCE RESTORATION METHODS. RESTORATION ACTIVITY WILL CONTINUE UNTIL SUCH TIME AS THE AFFECTED PROPERTY OWNER IS SATISFIED.

7. NO TEMPORARY OR PERMANENT STOCKPILING OF MATERIALS OR EQUIPMENT SHALL OCCUR WITHIN CRITICAL AREAS OR ASSOCIATED BUFFERS, OR THE CRITICAL ROOT ZONE FOR VEGETATION PROPOSED FOR RETENTION.



△ CITY COMMENTS - 07-13-21

- ADDED DEPT. OF ECOLOGY BMP DETAILS
- ADDED CoP APPROVAL STAMP

APPROVED

BY \_\_\_\_\_  
CITY OF PUYALLUP  
ENGINEERING SERVICES

DATE \_\_\_\_\_

NOTE: THIS APPROVAL IS VOID  
AFTER 1 YEAR FROM APPROVAL  
DATE.

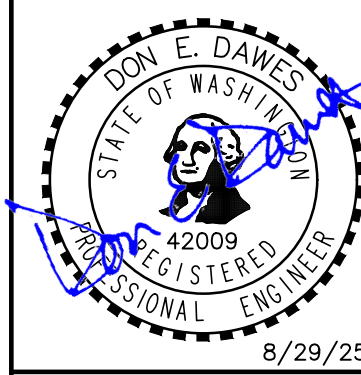
THE CITY WILL NOT BE  
RESPONSIBLE FOR ERRORS  
AND/OR OMISSIONS ON THESE  
PLANS.

FIELD CONDITIONS MAY DICTATE  
CHANGES TO THE PLANS AS  
DETERMINED BY THE ENGINEERING  
SERVICES MANAGER.

EROSION & SEDIMENT CONTROL  
PLAN DETAILS - ASBUILT  
**HOMewood SUITES**

HERITAGE INN & SUITES OF  
PUYALLUP, LLC  
4500 36TH AVE. S, SUITE 200  
FARGO, NE 58104


For:



Scale:	horizontal	N/A	vertical
--------	------------	-----	----------

Designed	DC
Drawn	DC
Checked	DD
Approved	DD
Date	8/29/25

**Barghausen  
Consulting Engineers, LLC.**  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222 **barghausen.com**



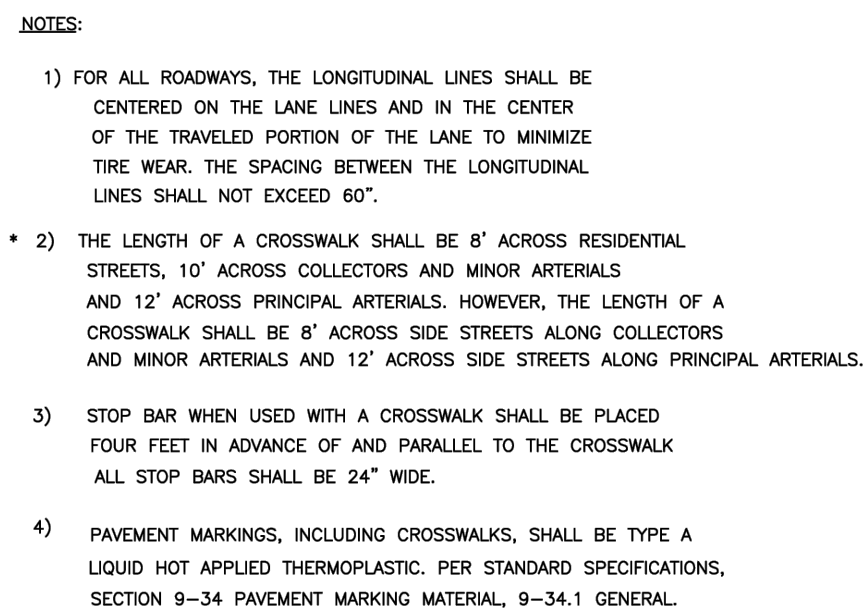
Job Number  
22507  
Sheet  
C-618

C:\22000s\22507\asbuilt\22507 - Notes & Details.dwg 8/15/2025 4:08 PM AOEHLER

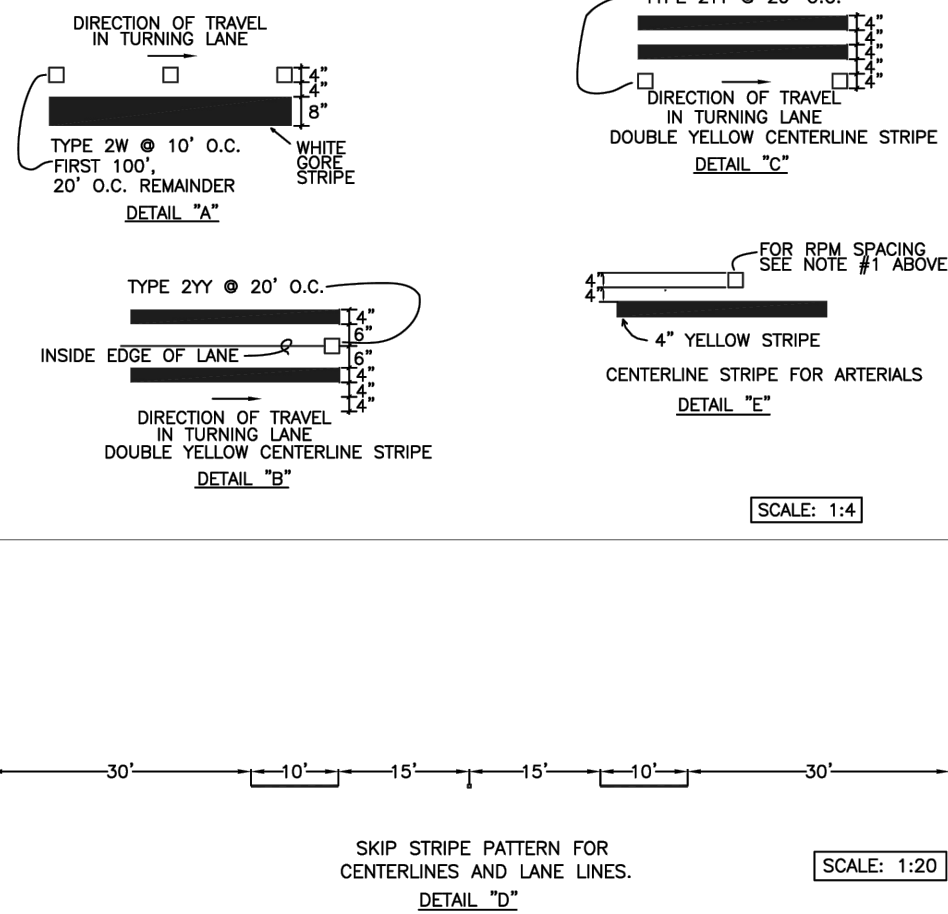
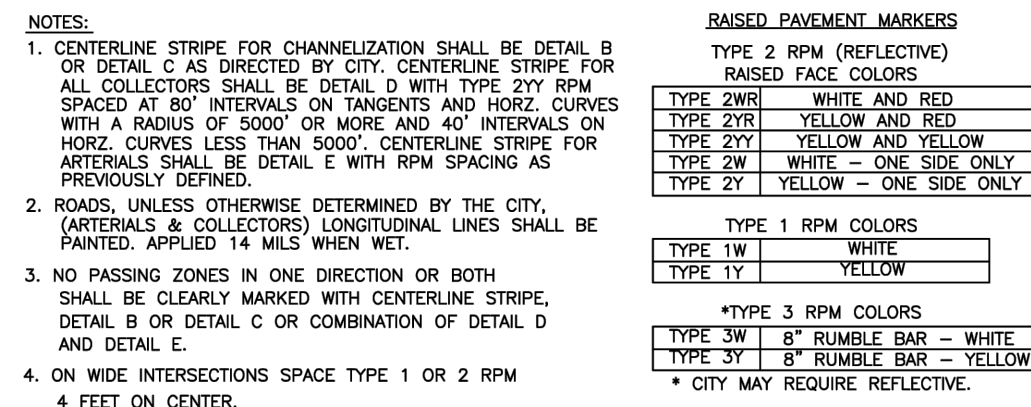




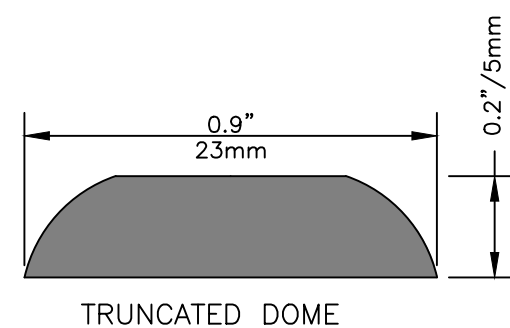




DRAWN BY JIM ERWIN-SVOBODA	CHECKED BY LINDA LIAN	APPROVED BY COLLEEN HARRIS	REVISED BY LINDA LIAN	CITY STANDARD
FILE NAME F:\DWG\COMMON\STD\SCITY\2009\01_STR\01.07\01.03.11				DATE APPROVED 03/01/2009
				DATE REVISED 06/11/2013
				SCALE 1:8
				01.03.11



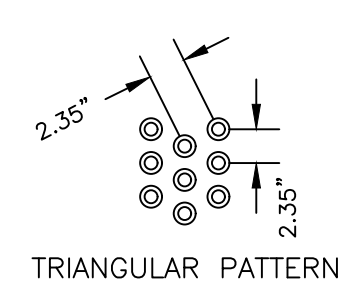
DRAWN BY JIM ERWIN-SVOBODA		CHECKED BY LINDA LIAN		APPROVED BY COLLEEN HARRIS		REVIEWED BY XXXX		CITY STANDARD	
FILE NAME F:\DWG\COMMON\STD\STD\CITY\2009\01_STR\01.03.10				DATE APPROVED 07/01/2009		DATE REVISSED XX/XX/XX		SCALE VARIES	
									01.03.10



NOTES:

1. TRUNCATED DOME PANELS SHALL BE RED FIBERGLASS AND CAST IN PLACE OR EQUAL APPROVED IN WRITING BY THE PERMITTING AUTHORITY.
2. THE DETECTABLE WARNING SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON DARK, OR DARK-ON-LIGHT AND MEET THE CONFIGURATION AND DIMENSION SHOWN (PER ADAAG 4.29.2).

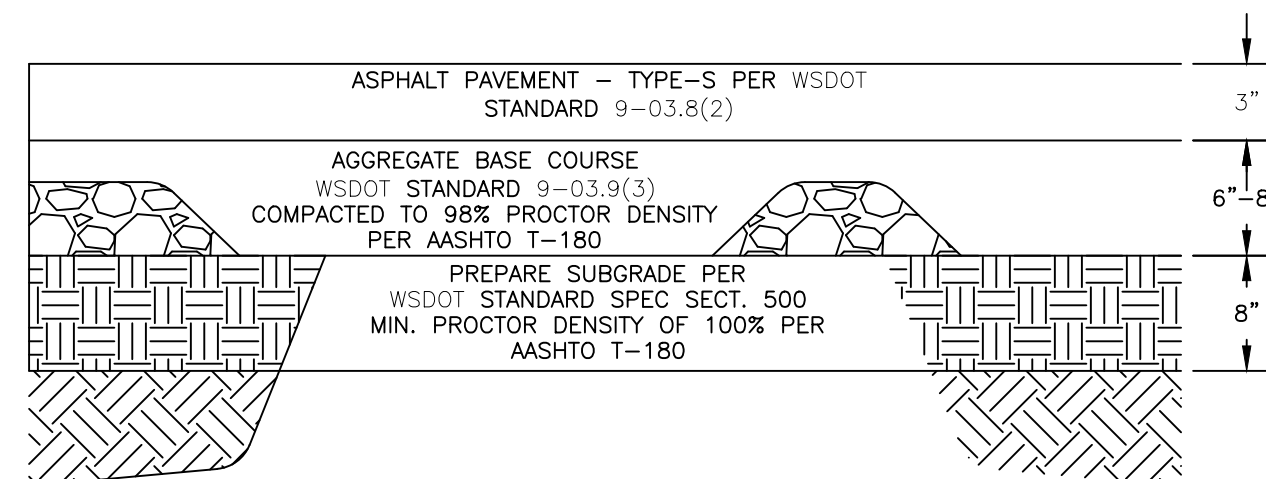
### 3 TRUNCATED DOME PANELS



NOTES:

1. PROVIDE 1/2" EXPANSION MATERIAL AT EXISTING CONCRETE JOINTS, BUILDINGS & ADJACENT TO CURB AND GUTTER.
2. PROVIDE FULL DEPTH EXPANSION JOINT WITH 1/2" EXPANSION MATERIAL AT 60' INTERVALS.
3. SAWCUT 1" DEEP AT 6' INTERVALS OR LESS TO APPROXIMATE SQUARE DESIGN.
4. PROVIDE 2-1/2" SMOOTH DOWELS @ 24" O.C. AT EXPANSION JOINTS.
5. CONCRETE SHALL BE 4,000 (OR HIGHER) P.S.I.

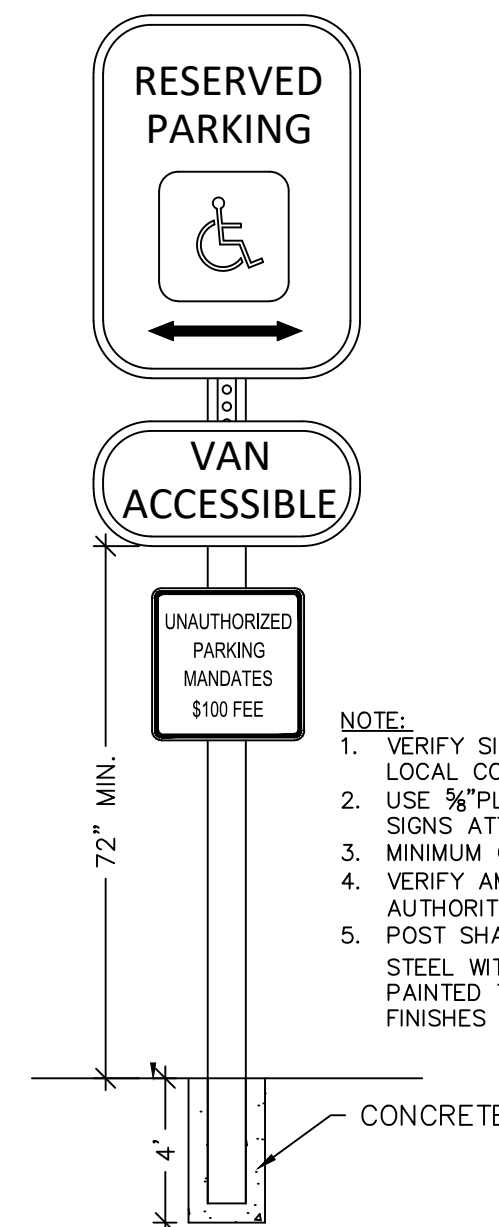
4 THICKENED EDGE CONCRETE  
N.T.S.



NOTES:

1. ALL PAVING MATERIALS AND CONSTRUCTION SHALL MEET WSDOT STANDARDS.
2. SITE ENTRY SHALL HAVE AN 8" AGGREGATE BASE COURSE, ALL REMAINING DRIVES AND PARKING SHALL HAVE A 6" AGGREGATE BASE COURSE.

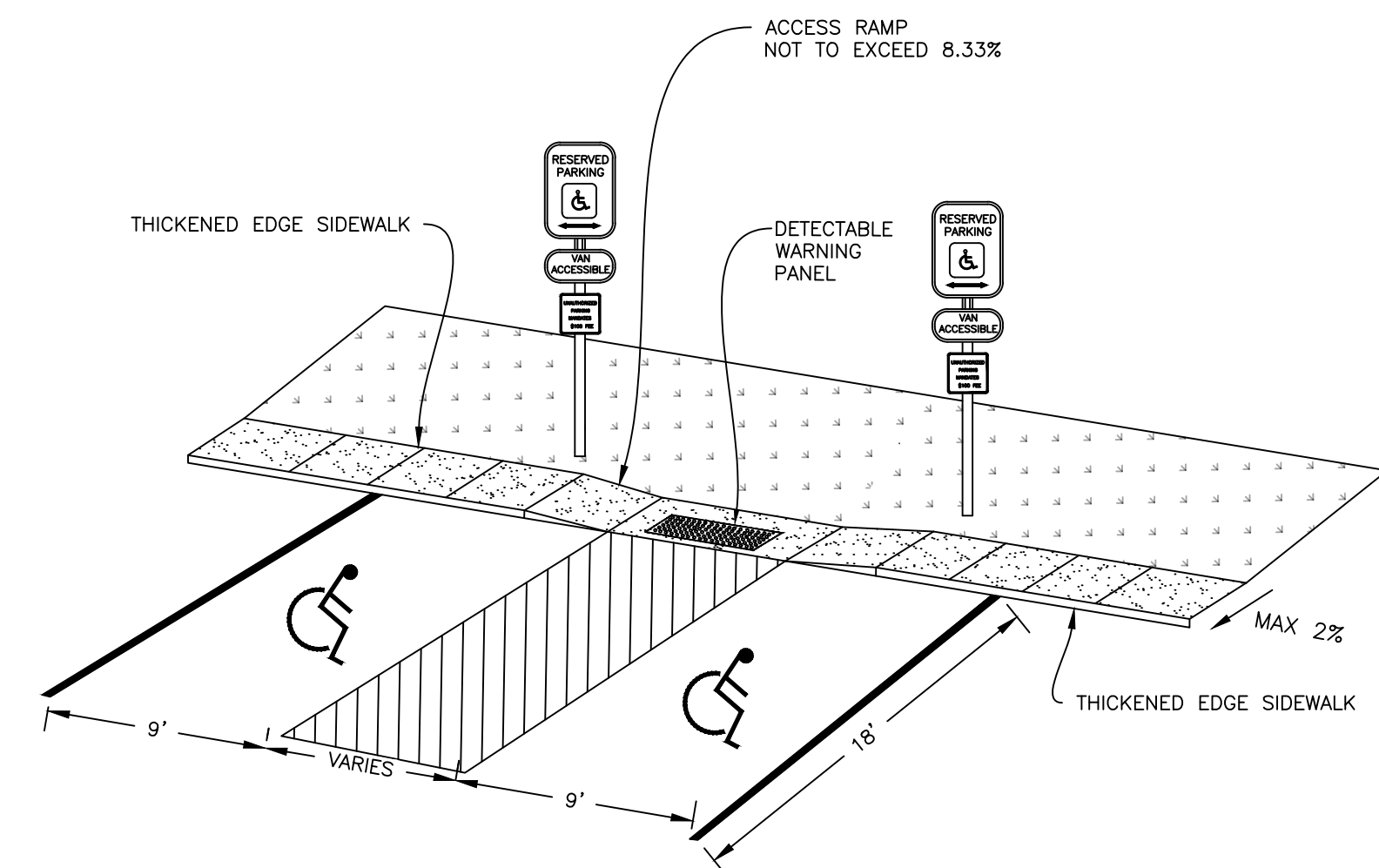
6 3" ASPHALT PAVEMENT  
N.T.S.



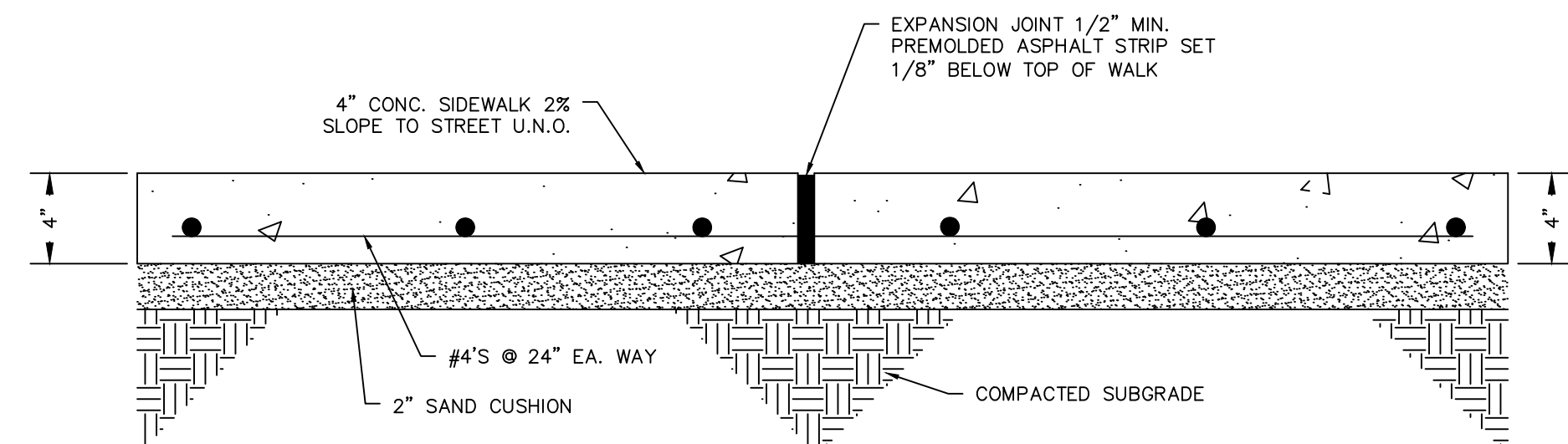
**NOTE:**

1. VERIFY SIGNAGE WITH ALL STATE AND LOCAL CODES
2. USE  $\frac{5}{8}$ " PLYWOOD ON BACK OF ALL SIGNS ATTACHED TO BUILDINGS
3. MINIMUM OF 72" TO BOTTOM OF SIGN.
4. VERIFY AMOUNT OF FINE W/LOCAL AUTHORITY.
5. POST SHALL BE 12' OF 3" TUBE STEEL WITH  $\frac{1}{8}$ " WALL PRIMED AND PAINTED TO MATCH ARCHITECTURAL FINISHES PER THE OWNER.

## 1 STANDARD ADA PARKING SIGN DETAIL



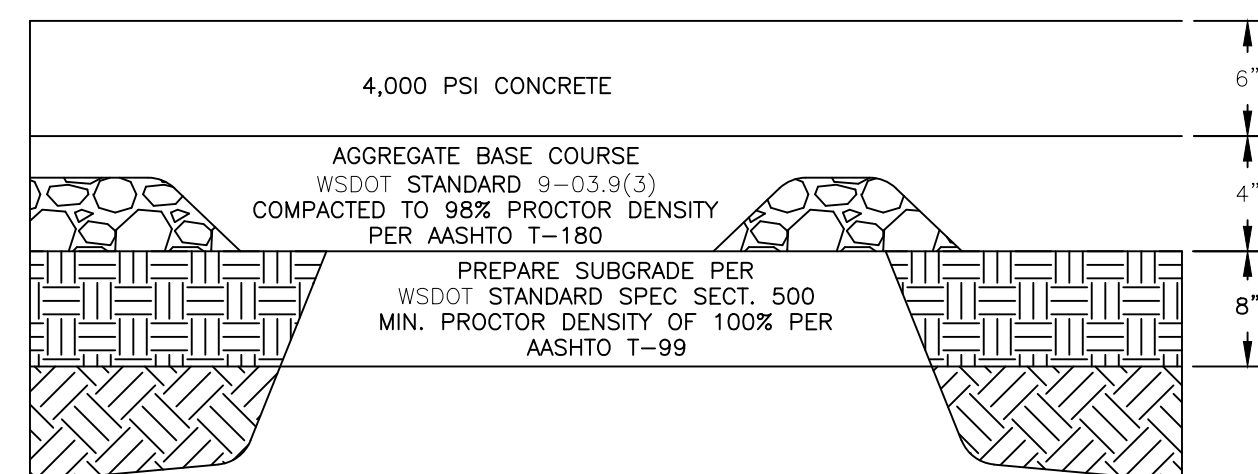
## 2 ADA RAMP



**NOTES:**

1. SAW CUT 1" DEEP EXPANSION JOINTS WITH #3 DOWELS 12" O.C. AT 6' INTERVALS OR LESS AND PROVIDE 1/2" EXPANSION MATERIAL AT ALL CONCRETE WALK INTERSECTIONS, DOOR OPENINGS, BUILDING WALLS, EXISTING CONCRETE JOINTS, & ADJACENT TO CURB AND GUTTER.
2. MAXIMUM CROSS SLOPE 2% FROM BUILDINGS, MAXIMUM LONGITUDINAL SLOPE 5%.
3. CONCRETE SHALL BE 4,000 (OR HIGHER) PSI AND PER CITY OF CONCORD SPECIFICATIONS.

5 4" CONCRETE SIDEWALK DETAIL  
N.T.S.



NOTES:

1. CONCRETE SHALL BE 4,000 (OR HIGHER) PSI AND PER WSDOT SPECIFICATIONS
2. INSTALL #4 REBAR STEEL REINFORCEMENT AT 24" ON CENTER EACH WAY THROUGHOUT CONCRETE PAVEMENT
3. REBAR SHALL BE INSTALLED AT MID DEPTH OF CONCRETE AND BE SUPPORTED BY "REBAR CHAIRS"
4. CONCRETE SHALL BE SAW CUT TO A DEPTH OF 1.5" IN A 4'-10" GRID PATTERN
5. CONCRETE SHALL BE TIED TO ALL CURB AND GUTTER WITH 18" #4 SMOOTH DOWEL AT 24" O.C. ONE END SHALL BE GREASED OR SLIP CAP PROVIDED.
6. ALL ORGANIC SOIL/BLACK DIRT ENCOUNTERED SHALL BE REMOVED FROM BELOW PAVEMENT SECTION UNDER THE DIRECTION OF THE GEOTECHNICAL ENGINEER.

7 6" CONCRETE PAVEMENT  
N.T.S.

△ CITY COMMENTS - 07-13-21  
• ADDED CoP APPROVAL STAMP

△	2/10/25	DC	DD	DD	REVISED PER SITE PLAN CHANGES
No.	Date	By	Ckd.	Appr.	Revision

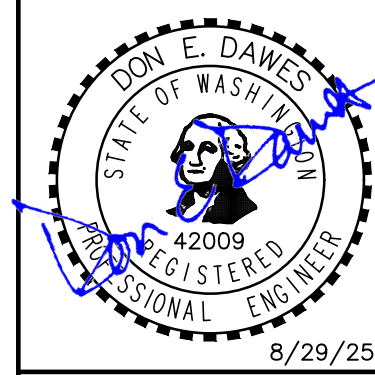
Title:

GENERAL NOTES - ASBUILT

## HOMewood Suites

HERITAGE INN & SUITES OF  
PUYALLUP, LLC  
4500 36TH AVE. S, SUITE 200  
FARGO, NE 58104

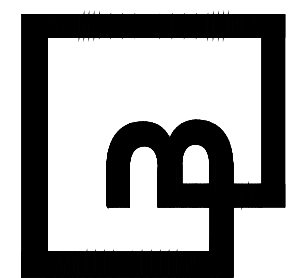
For:



Scale:  
Horizontal  
N/A  
Vertical

Designed DC  
 Drawn DC  
 Checked DD  
 Approved DD  
 Date 8/29/25

**Barghausen**  
**Consulting Engineers, LLC.**  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222 **barghausen.com**



Job Number 22507

Sheet

7.1.8

P:\22000s\22507\asbuill\22507 - Notes & Details.dwg 8/15/2025 4:08 PM AOEHLER



Diagram showing water valve details with notes on installation and materials. Includes a table for water valves and mains.

**WATER VALVES AND MAINS**

CITY OF PUYALLUP  
OFFICE OF THE CITY ENGINEER  
DATE: 2/15/2018  
CITY STANDARD 03.01.01

Diagram showing water main crossing other utilities with notes on installation and materials. Includes a table for water main crossing other utilities.

**WATER MAIN CROSSING OTHER UTILITIES**

CITY OF PUYALLUP  
OFFICE OF THE CITY ENGINEER  
DATE: 2/15/2018  
CITY STANDARD 03.01.03-1

Diagram showing water main crossing other utilities with notes on installation and materials. Includes a table for water main crossing other utilities.

**WATER MAIN CROSSING OTHER UTILITIES (NOTES)**

CITY OF PUYALLUP  
OFFICE OF THE CITY ENGINEER  
DATE: 2/15/2018  
CITY STANDARD 03.01.03-2

Diagram showing horizontal thrust blocking with notes on installation and materials. Includes a table for horizontal thrust blocking.

**HORIZONTAL THRUST BLOCKING**

CITY OF PUYALLUP  
OFFICE OF THE CITY ENGINEER  
DATE: 2/15/2018  
CITY STANDARD 03.02.01-1

Diagram showing vertical thrust blocking with notes on installation and materials. Includes a table for vertical thrust blocking.

**VERTICAL THRUST BLOCKING**

CITY OF PUYALLUP  
OFFICE OF THE CITY ENGINEER  
DATE: 2/15/2018  
CITY STANDARD 03.02.01-2

Diagram showing thrust blocking table with notes on installation and materials. Includes a table for thrust blocking table.

**THRUST BLOCKING TABLE**

CITY OF PUYALLUP  
OFFICE OF THE CITY ENGINEER  
DATE: 2/15/2018  
CITY STANDARD 03.02.01-3

Diagram showing 3"-4"-6" water service with notes on installation and materials. Includes a table for 3"-4"-6" water service.

**3"-4"-6" WATER SERVICE**

CITY OF PUYALLUP  
OFFICE OF THE CITY ENGINEER  
DATE: 2/15/2018  
CITY STANDARD 03.03.03

Diagram showing horizontal thrust blocking with notes on installation and materials. Includes a table for horizontal thrust blocking.

**HORIZONTAL THRUST BLOCKING**

CITY OF PUYALLUP  
OFFICE OF THE CITY ENGINEER  
DATE: 2/15/2018  
CITY STANDARD 03.02.01-1

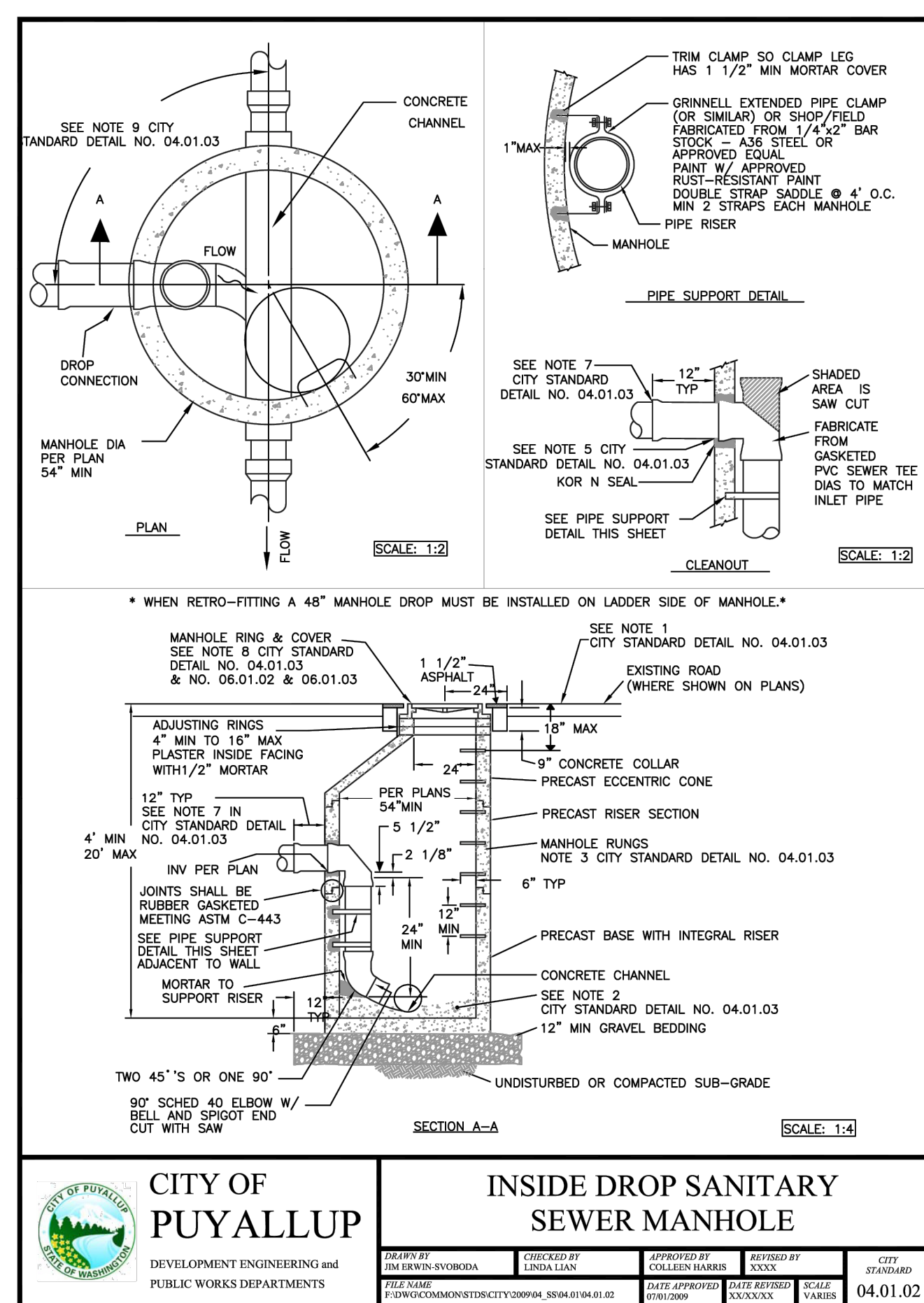
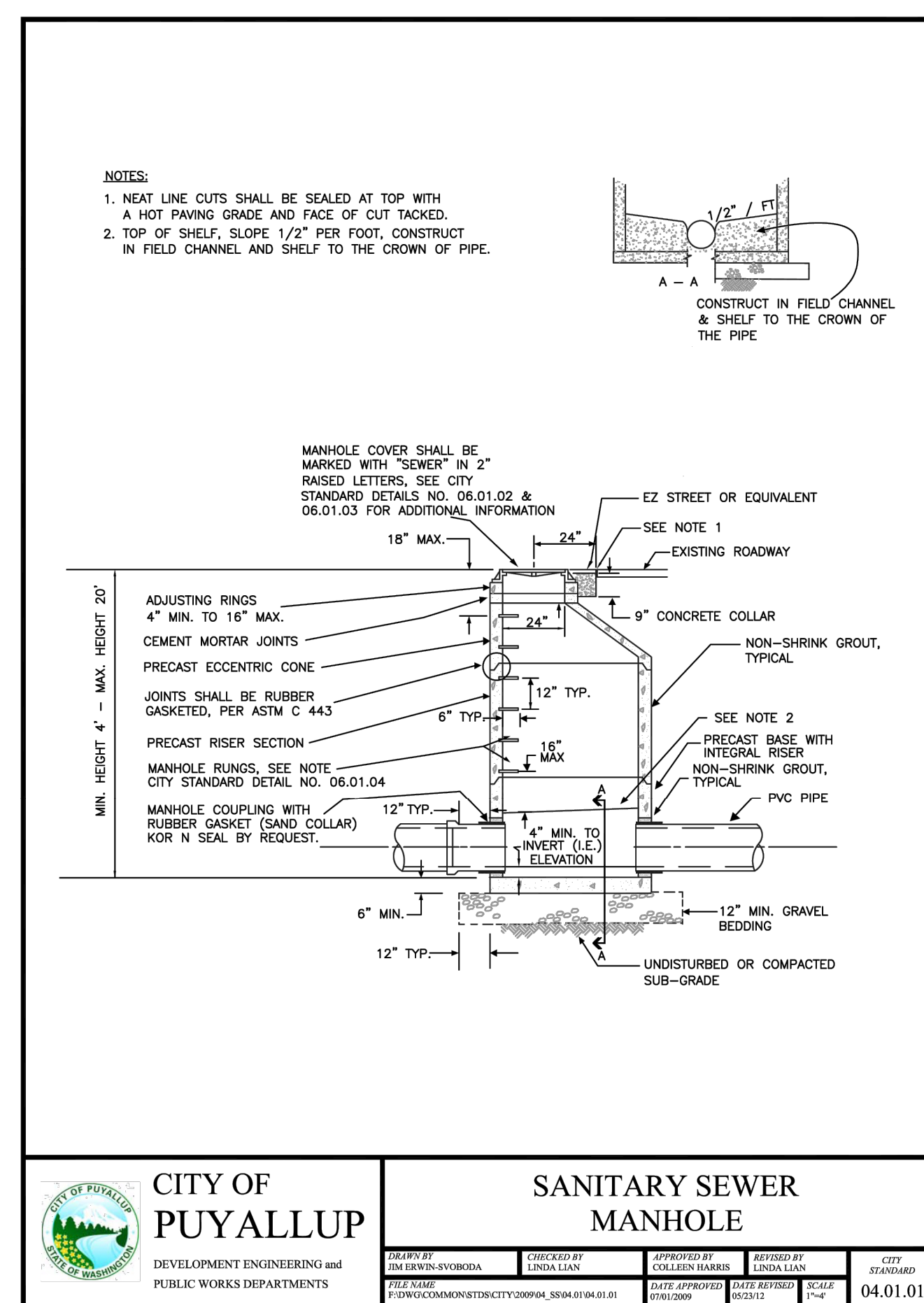
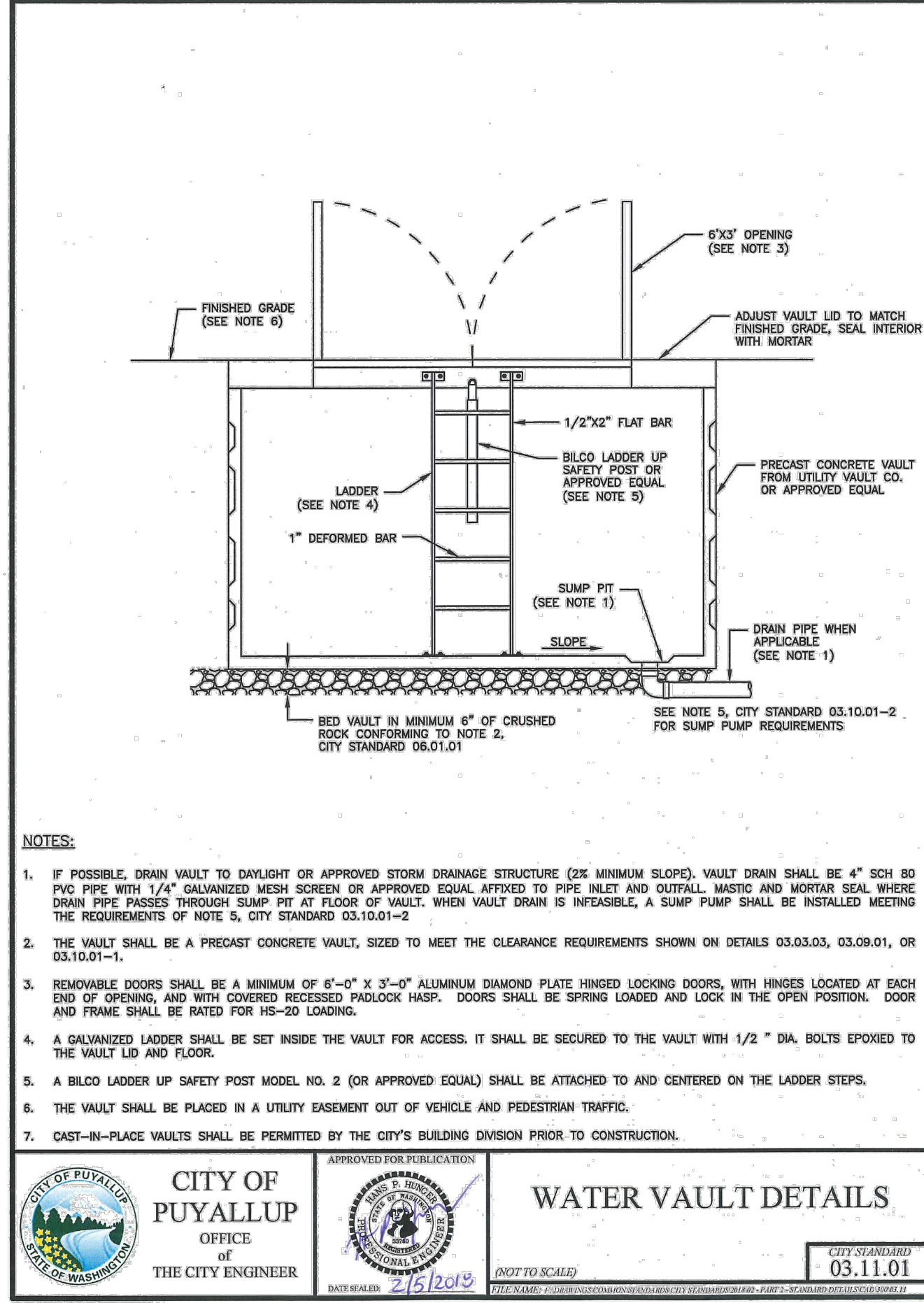
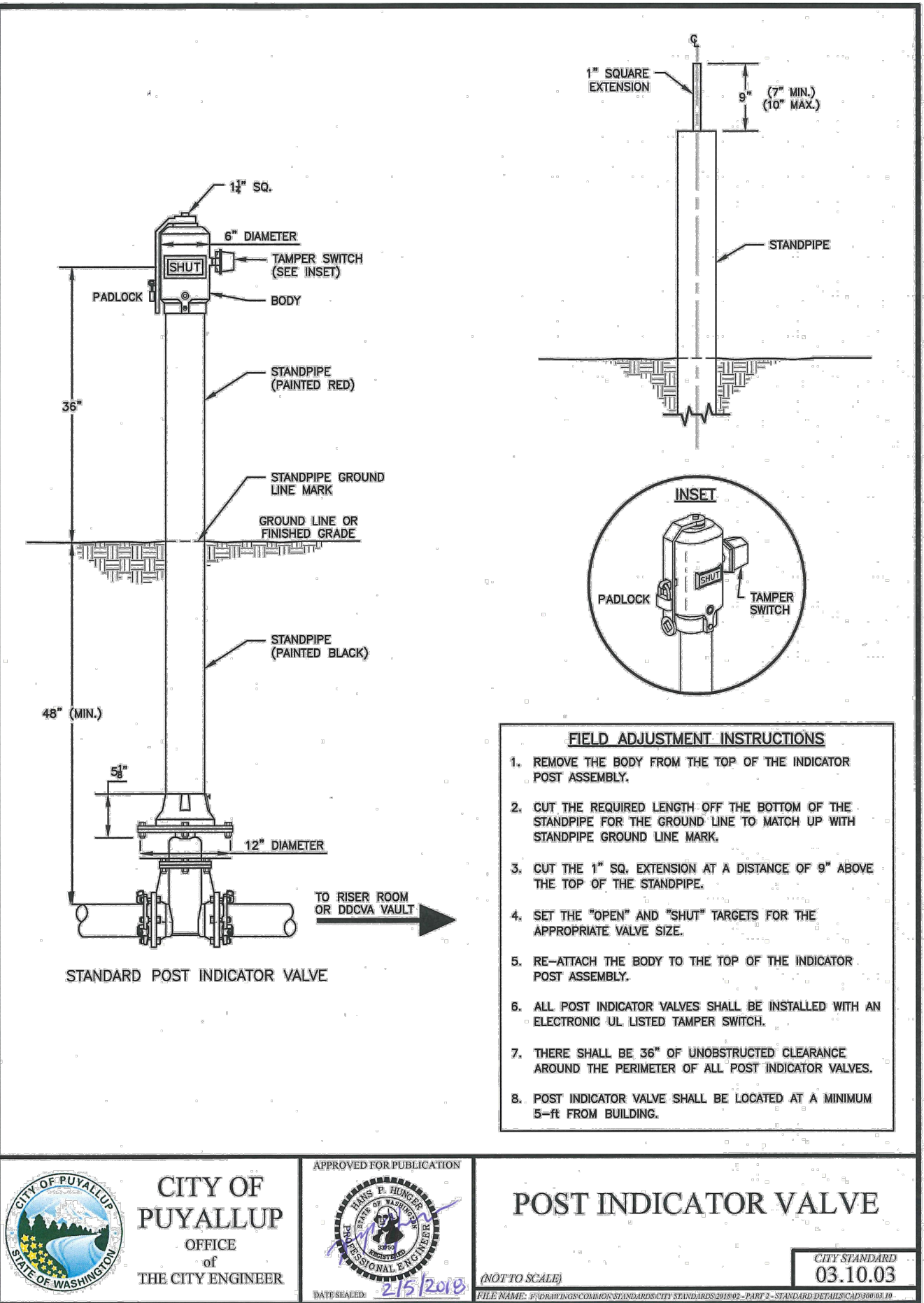
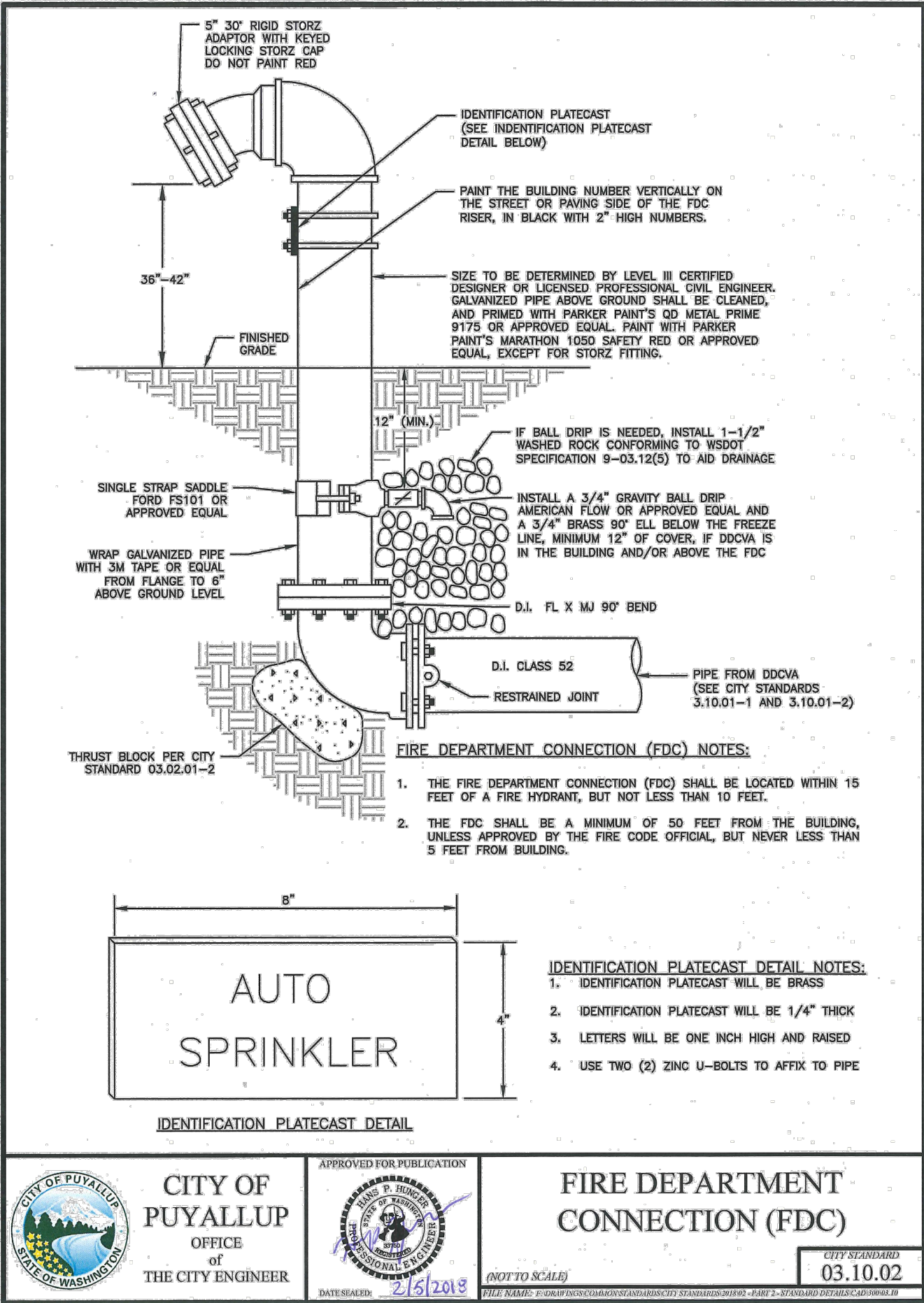
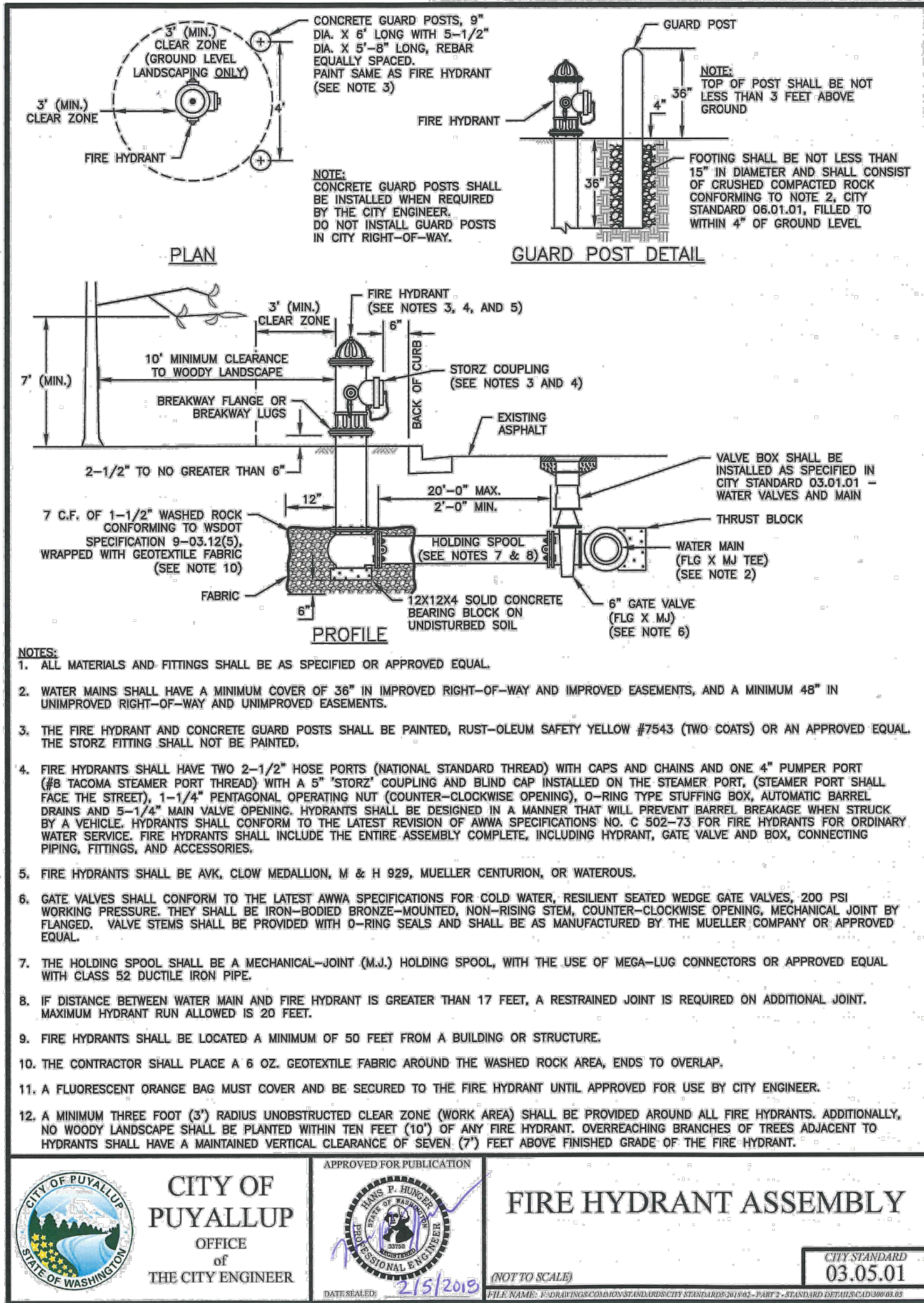
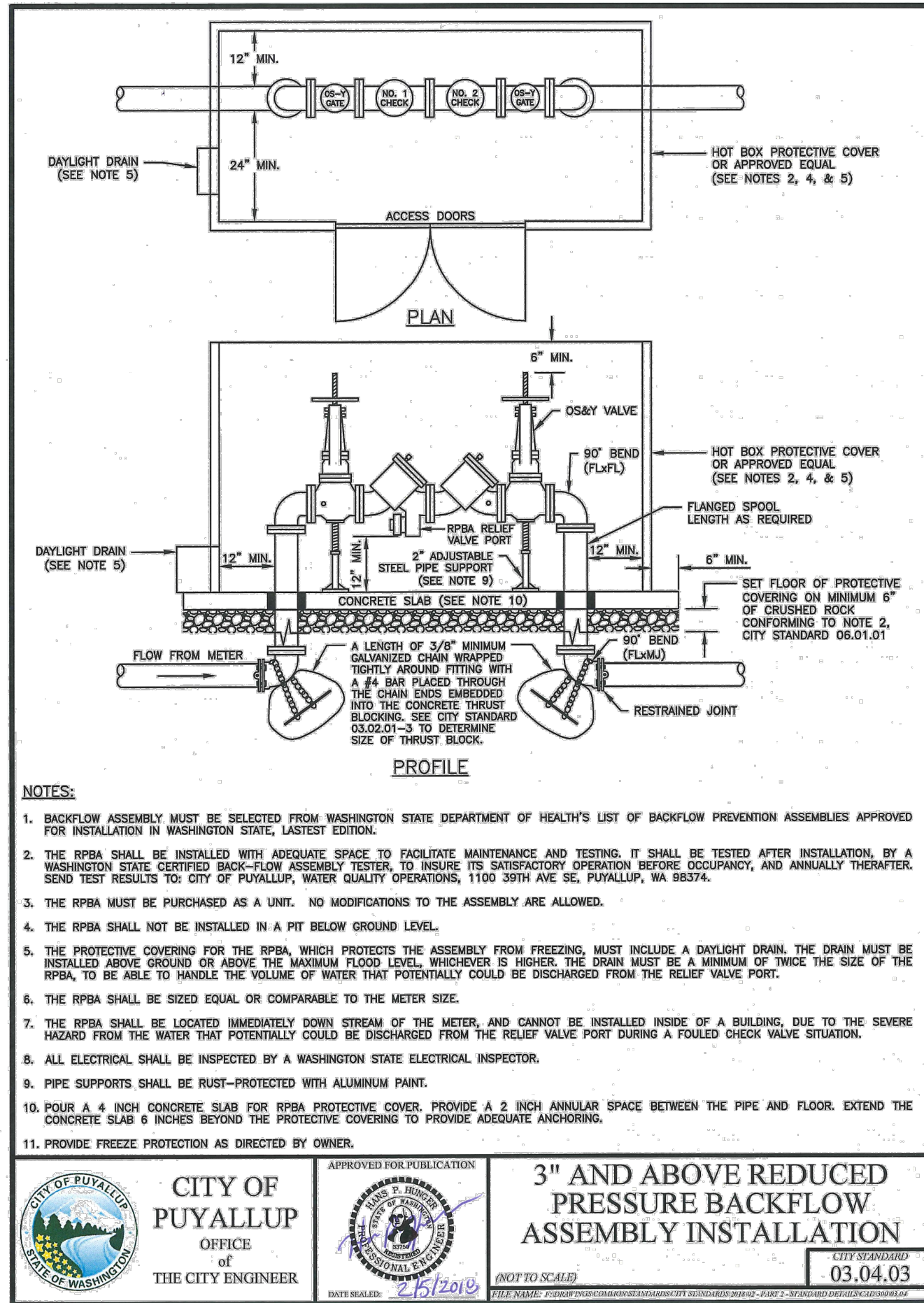
Project information and title block. Includes title, project name, location, and drawing details.

**UTILITY DETAILS - ASBUILT**

HERITAGE INN & SUITES OF PUYALLUP, LLC  
4500 36TH AVE. S, SUITE 200  
FARGO, NE 58104

Job Number: 22507  
Sheet: C-8 of 8





Revision

Revised	By	Date	Appr.
2/15/25	DC	DD	DD

Title:

HERITAGE INN & SUITES OF  
PUYALLUP, LLC  
4500 36TH AVE. S, SUITE 200  
FARGO, NE 58104

For:

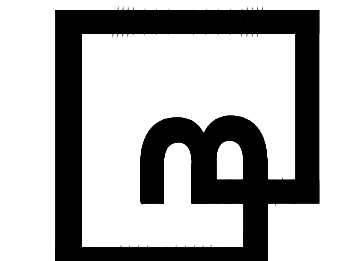


Scale:

Horizontal	Vertical
N/A	N/A

Designed: DC  
Drawn: DC  
Checked: DD  
Approved: DD  
Date: 8/29/25

**Barghausen Consulting Engineers, LLC.**  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222  
barghausen.com



Job Number: 22507  
Sheet: C-8.1  
8

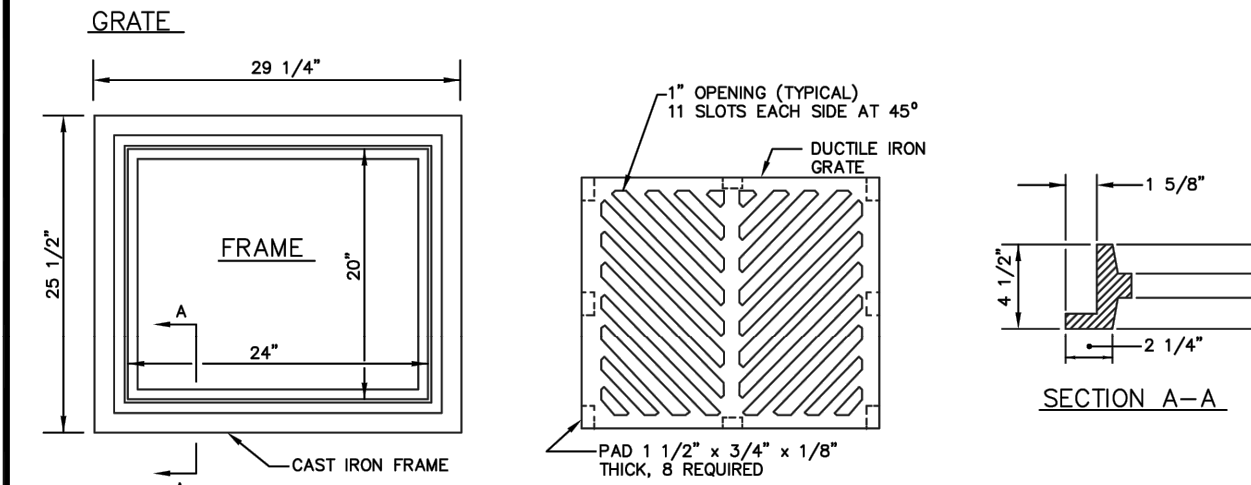
CITY COMMENTS - 07-13-21  
• ADDED CoP APPROVAL STAMP



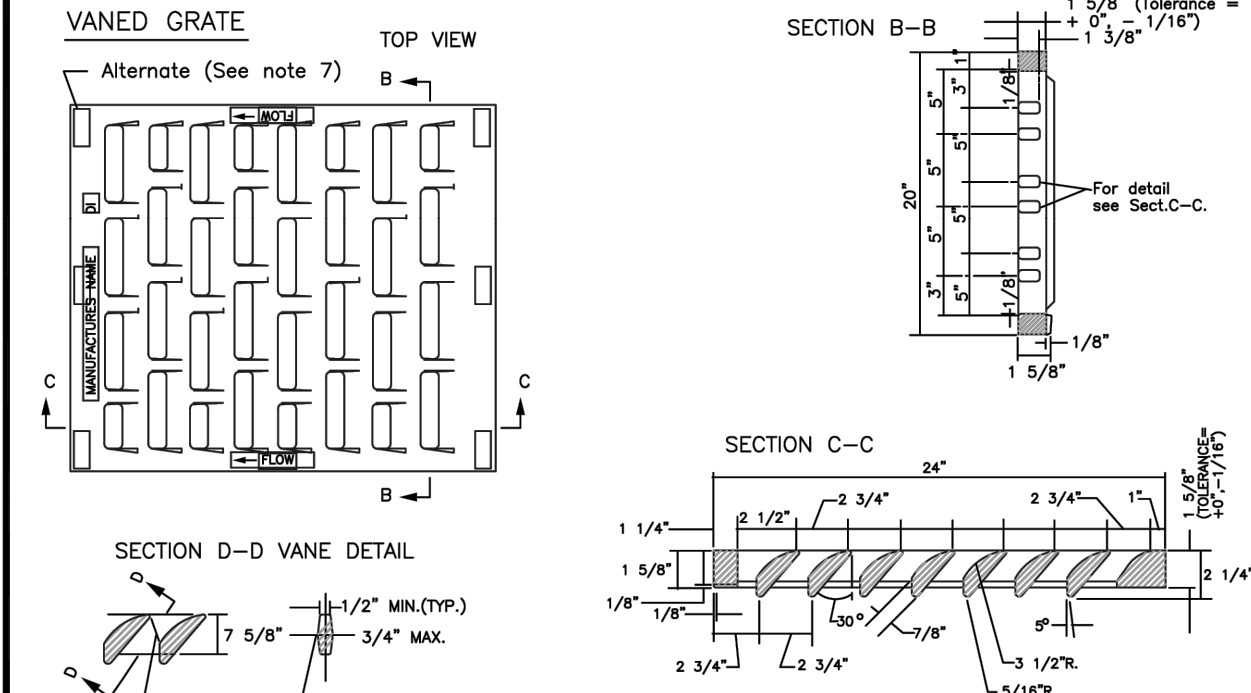
NOTES FOR: INSIDE DROP SANITARY SEWER MANHOLE

- NEAT LINE CUTS SHALL BE SEALED AT TOP WITH A HOT PAVING GRADE ASPHALT AND FACE OF CUT TACKED. ASPHALT DEPTH TO MATCH EXISTING.
- TOP OF SHELF, SLOPE 1/2" PER FOOT MINIMUM, CONSTRUCT IN FIELD CHANNEL AND SHELF TO THE CROWN OF PIPE.
- MANHOLE RING SHALL CONFORM TO SECTION R, ASTM C 478 (AASHTO M-199) AND MEET ALL OSHA REQUIREMENTS. MANHOLE RUNGS SHALL BE PARALLEL OR APPROXIMATELY RADIAL AT THE OPTION OF THE MANUFACTURER, EXCEPT THAT ALL STEPS IN ANY MANHOLE SHALL BE SIMILAR. PENETRATION OF OUTER WALL BY A LEAK IS PROHIBITED. SEE CITY STANDARD DETAIL NO. 06.01.04 & 06.01.05
- PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MINIMUM. DROP INLET PIPE HOLE MAY BE FIELD CONSTRUCTED.
- KNOCKOUT OR CUTOUT HOLE SIZE IS EQUAL TO PIPE OUTER DIAMETER PLUS MANHOLE WALL THICKNESS. MINIMUM DISTANCE BETWEEN HOLES IS 8".
- PRECAST CONCRETE MANHOLE COMPONENTS SHALL CONFORM TO ASTM C 478.
- FLEXIBLE JOINTS SHALL BE RUBBER GASKETED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. MORTARED, DRY-PAKED, OR CAST-IN-PLACE JOINTS WILL BE PERMITTED ONLY FOR CONNECTIONS TO OR THROUGH MANHOLES. A FLEXIBLE GASKETED JOINT SHALL BE INSTALLED WITHIN ONE (1) FOOT OF EACH CONNECTION TO MANHOLES. CONNECTIONS TO MANHOLE SHALL UTILIZE A KOR N SEAL CONNECTION MORTARED. CONNECTIONS TO THESE STRUCTURES WITH PVC PIPE SHALL UTILIZE A MANHOLE COUPLING AND RUBBER GASKET.
- MANHOLE RING AND COVER: THE COVER SHALL BE MARKED WITH "SEWER" IN TWO (2) INCH RAISED LETTERS (SEE CITY STANDARD DETAILS NO. 06.01.02 AND 06.01.03 FOR ADDITIONAL INFORMATION).
- THE MAXIMUM CHANGE IN FLOW DIRECTION IN MANHOLES SHALL BE 90 DEGREES. FOR ALL CHANGES IN FLOW DIRECTION GREATER THAN 45 DEGREES, A MINIMUM DROP OF 0.10 FEET BETWEEN INVERTS SHALL BE PROVIDED AND CHANNELIZATION PROVIDED.

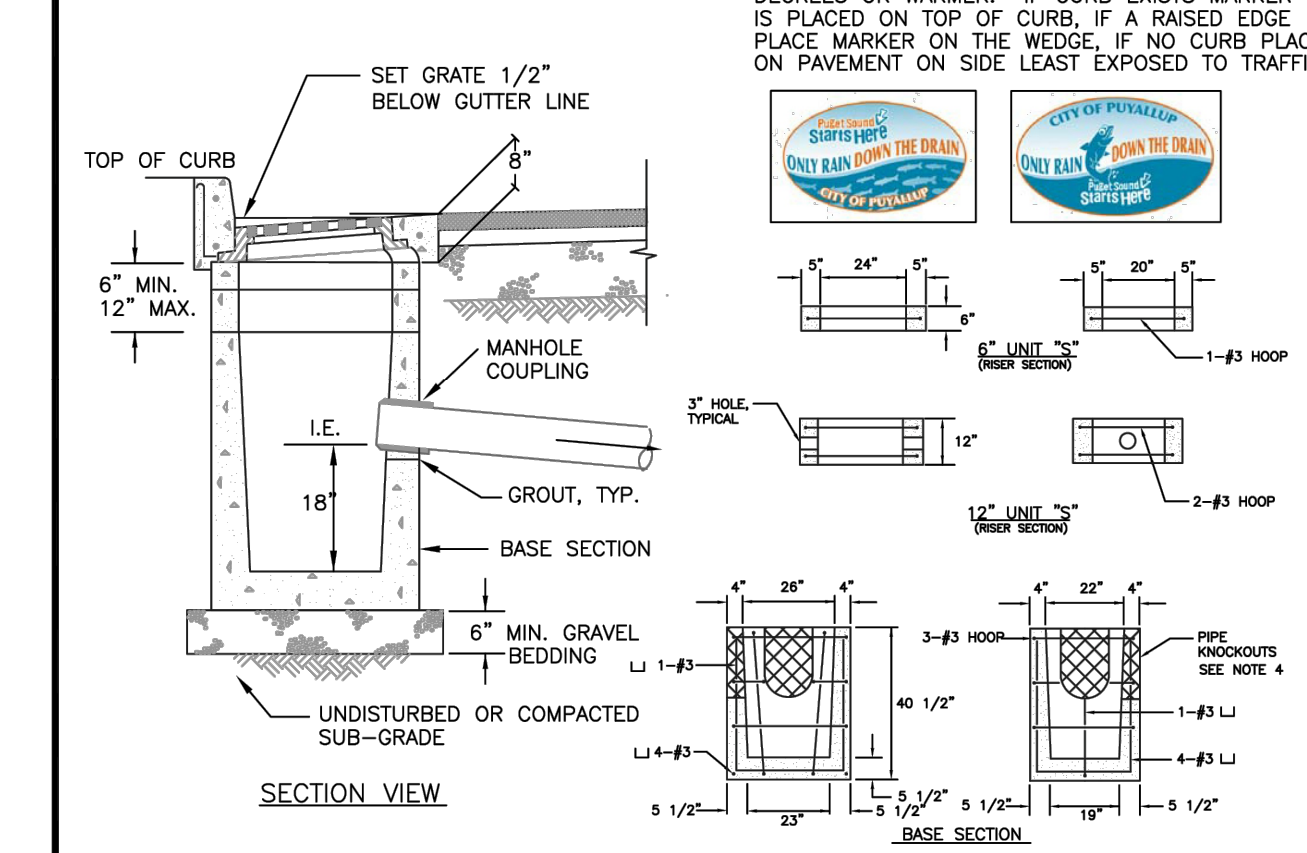
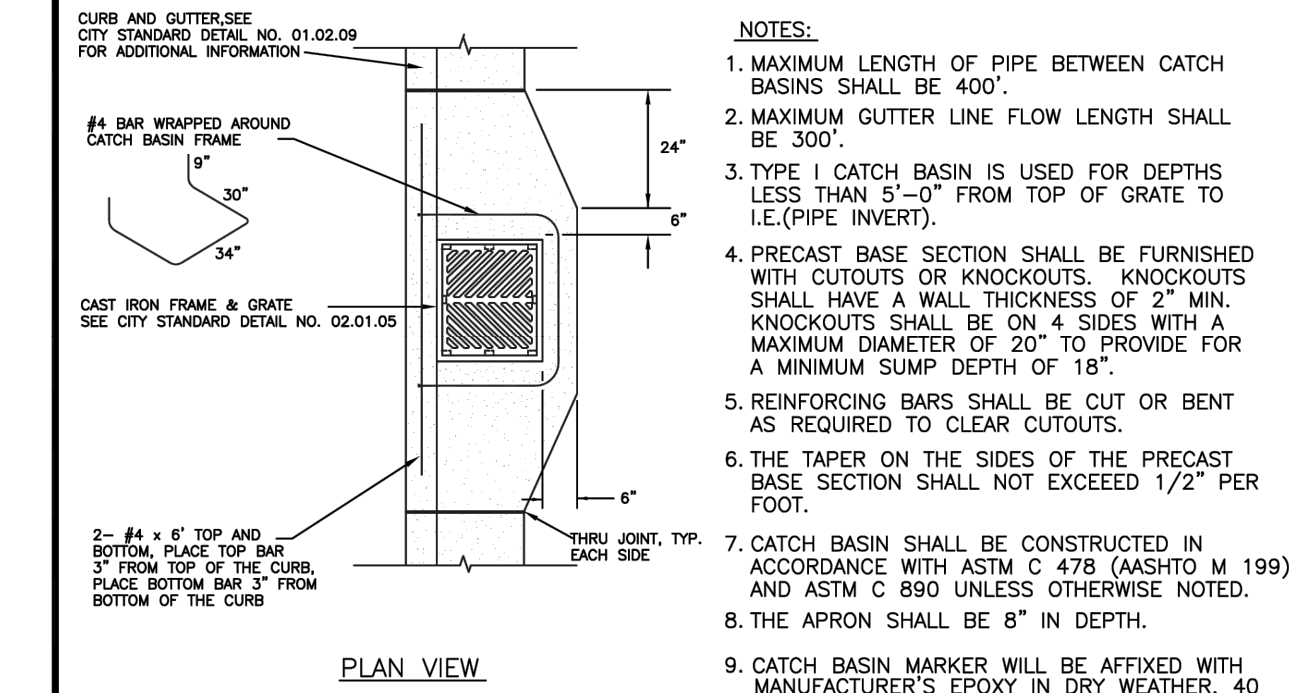
CITY OF PUYALLUP DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS	INSIDE DROP SANITARY SEWER MANHOLE (NOTES)		CITY STANDARD 04.01.03
	DESIGNED BY LINDA LAMM	CHECKED BY LINDA LAMM	



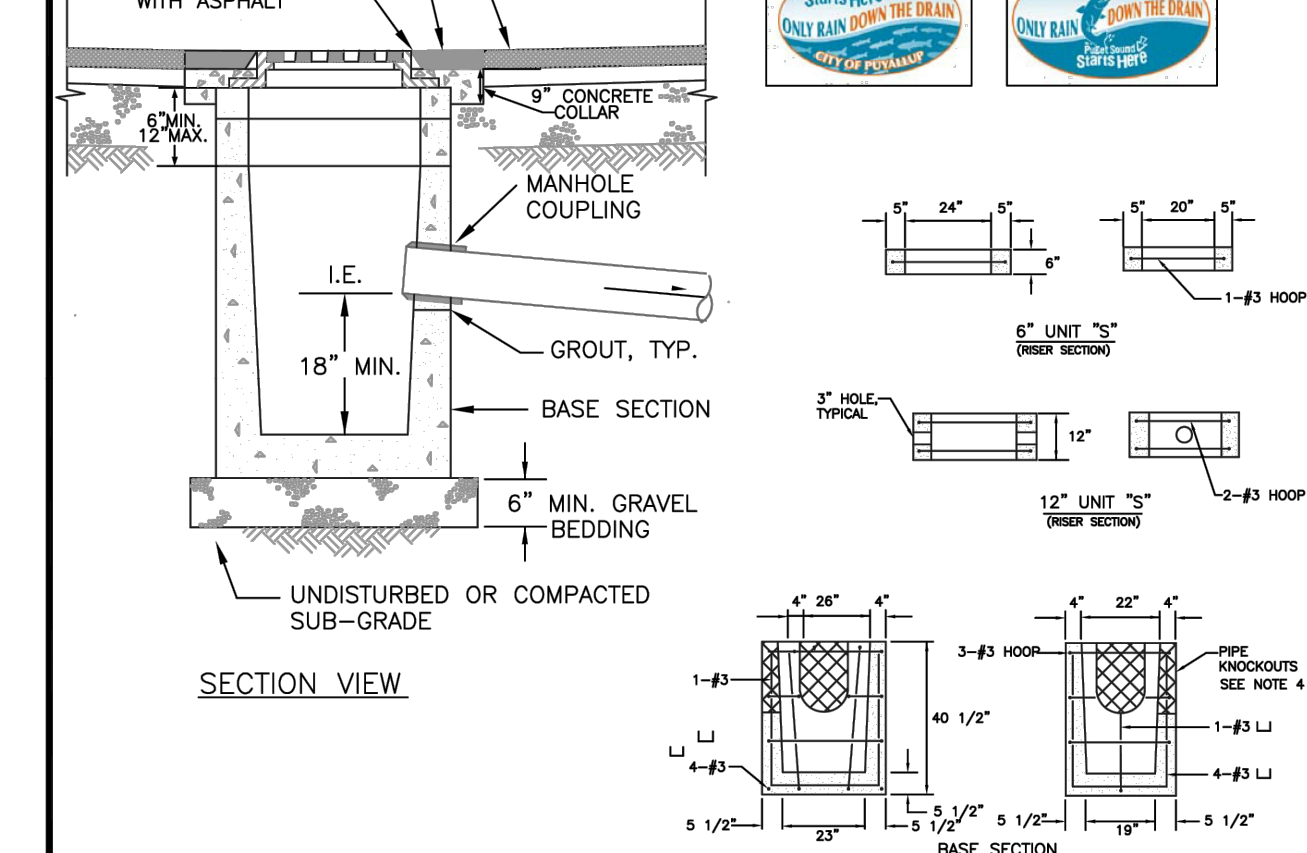
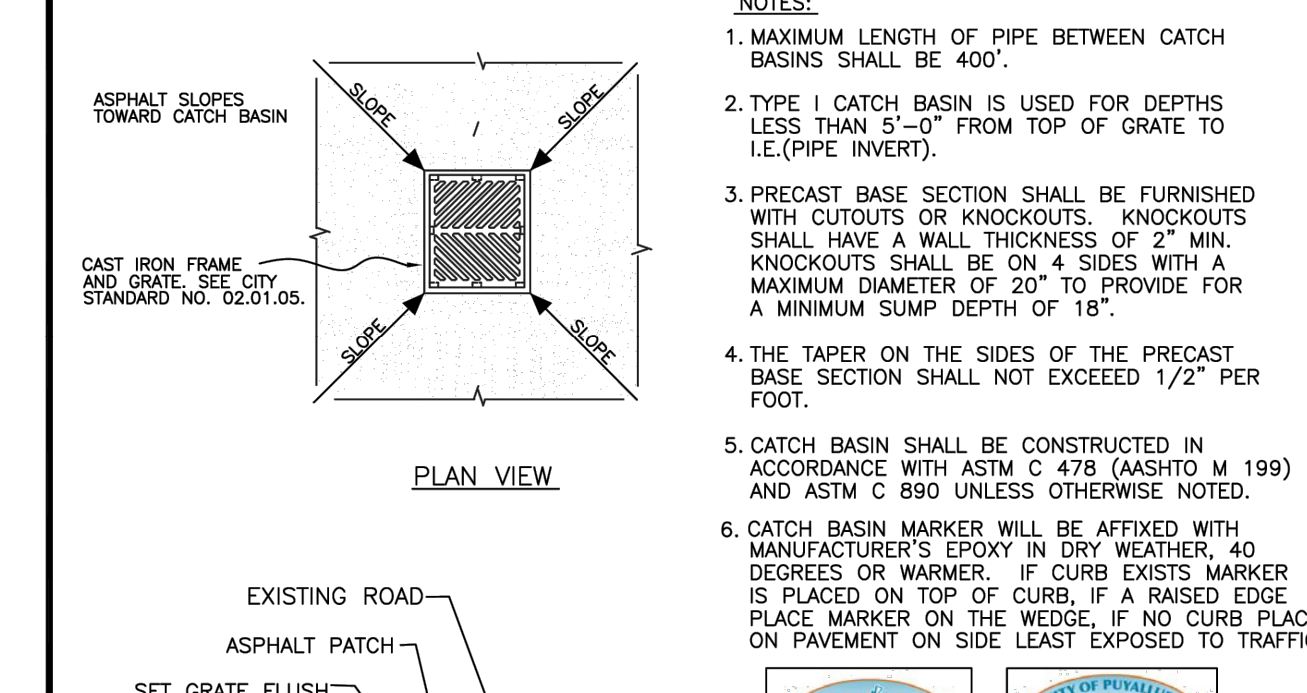
- NOTES:
- MATERIAL SHALL CONFORM TO SECTION 9-05.15 "METAL CASTINGS" OF THE "STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION" PUBLISHED BY THE STATE DEPARTMENT OF TRANSPORTATION AND AMERICAN PUBLIC WORKS ASSOCIATION, WASHINGTON STATE CHAPTER.
  - THE NAME OF THE MANUFACTURE AND DIRECTION OF FLOW SHALL BE EMBOSSED ON THE TOP SURFACE OF EACH GRATE. LETTERING TO BE RECESSED 1/16".
  - THE MATERIAL USED FOR THE GRATE SHALL BE DESIGNATED BY EMBASSING EITHER DI (FOR DUCTILE IRON) OR CS (FOR CAST STEEL) NEAR THE NAME OF THE MANUFACTURER.
  - DIMENSIONS SHALL HAVE A +/- 1/16" TOLERANCE, EXCEPT AS NOTED.
  - EDGES SHALL HAVE 1/8" RADIUS.
  - WELDING IS NOT PERMITTED.
  - AS AN ALTERNATE, 8 PADS 1 1/2" X 3/4" X 1/8", INTEGRALLY CAST WITH THE GRATE, MAY BE USED.



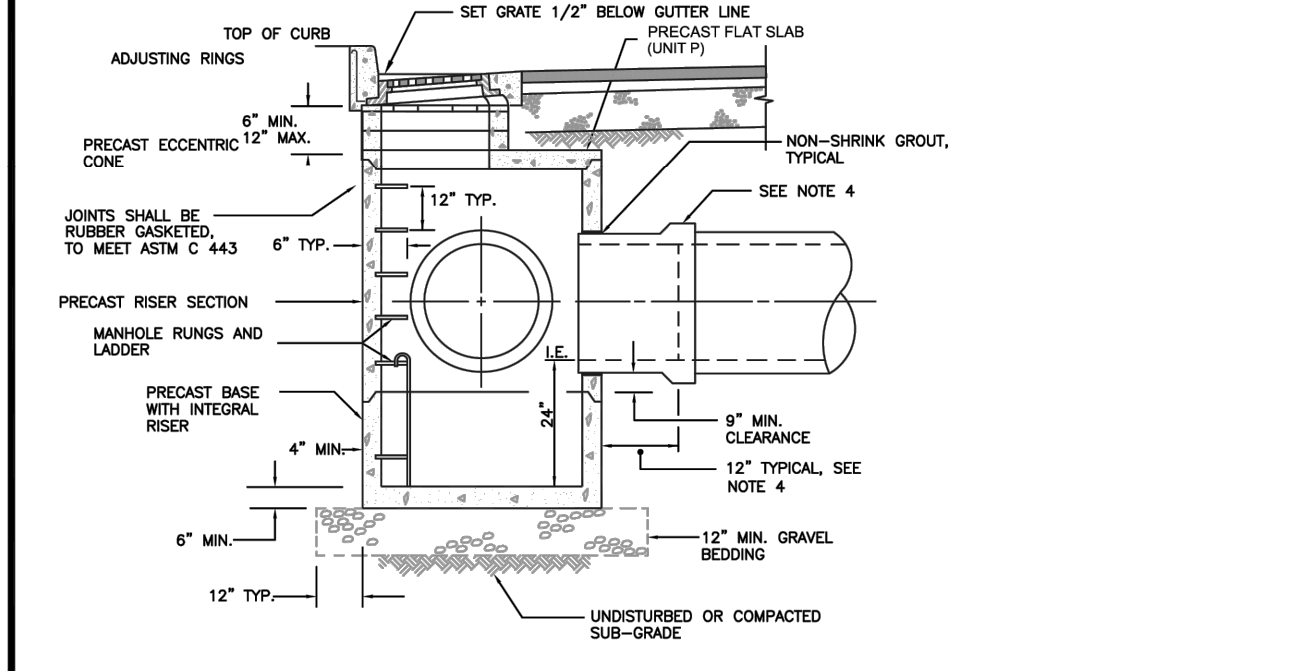
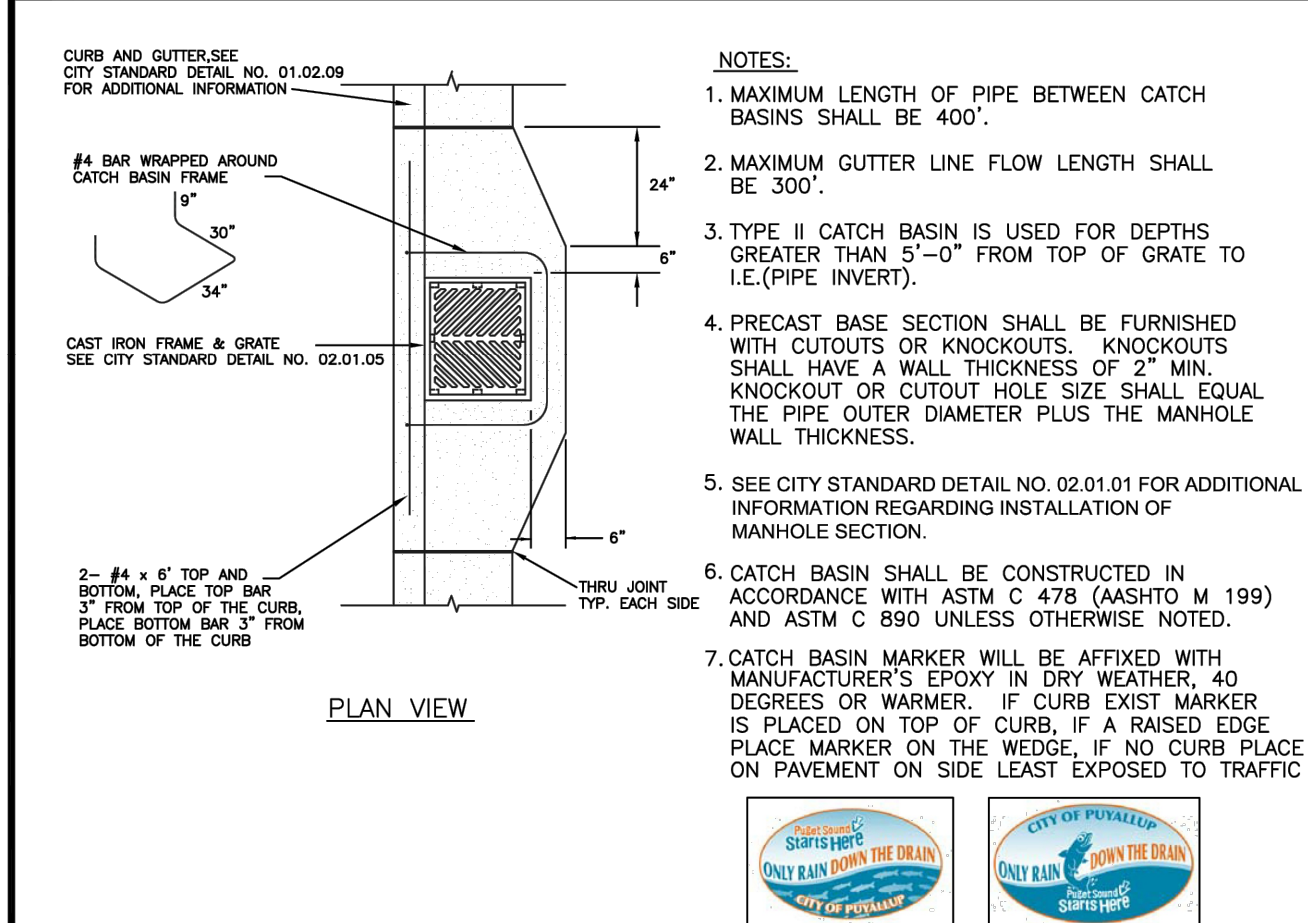
CITY OF PUYALLUP DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS	CATCH BASIN FRAME AND GRATE/VANED GRATE		CITY STANDARD 02.01.05
	DESIGNED BY LINDA LAMM	CHECKED BY LINDA LAMM	



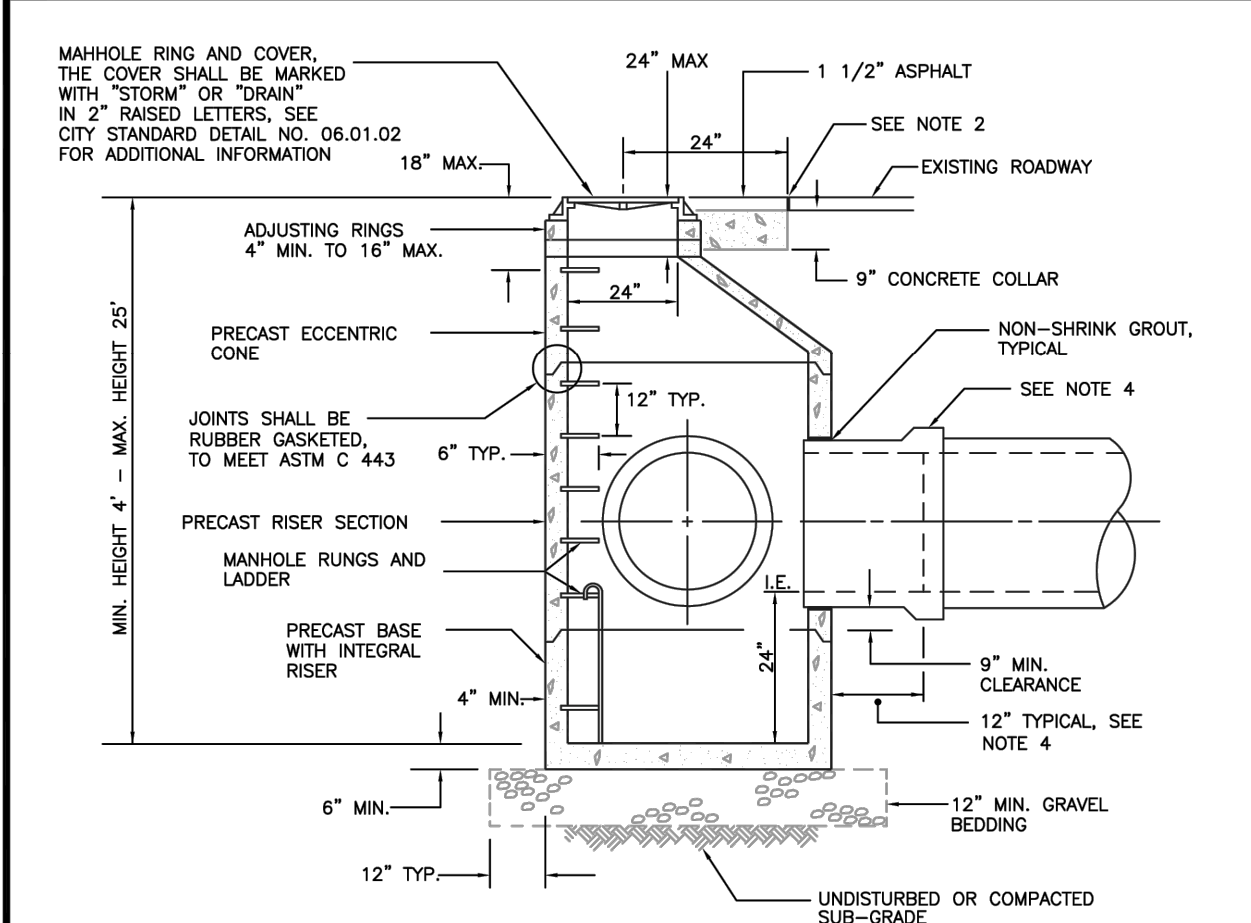
CITY OF PUYALLUP DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS	CATCH BASIN TYPE 1 (GUTTER DRAIN)		CITY STANDARD 02.01.03
	DESIGNED BY LINDA LAMM	CHECKED BY LINDA LAMM	



CITY OF PUYALLUP DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS	CATCH BASIN TYPE 1 (AREA DRAIN)		CITY STANDARD 02.01.02
	DESIGNED BY LINDA LAMM	CHECKED BY LINDA LAMM	

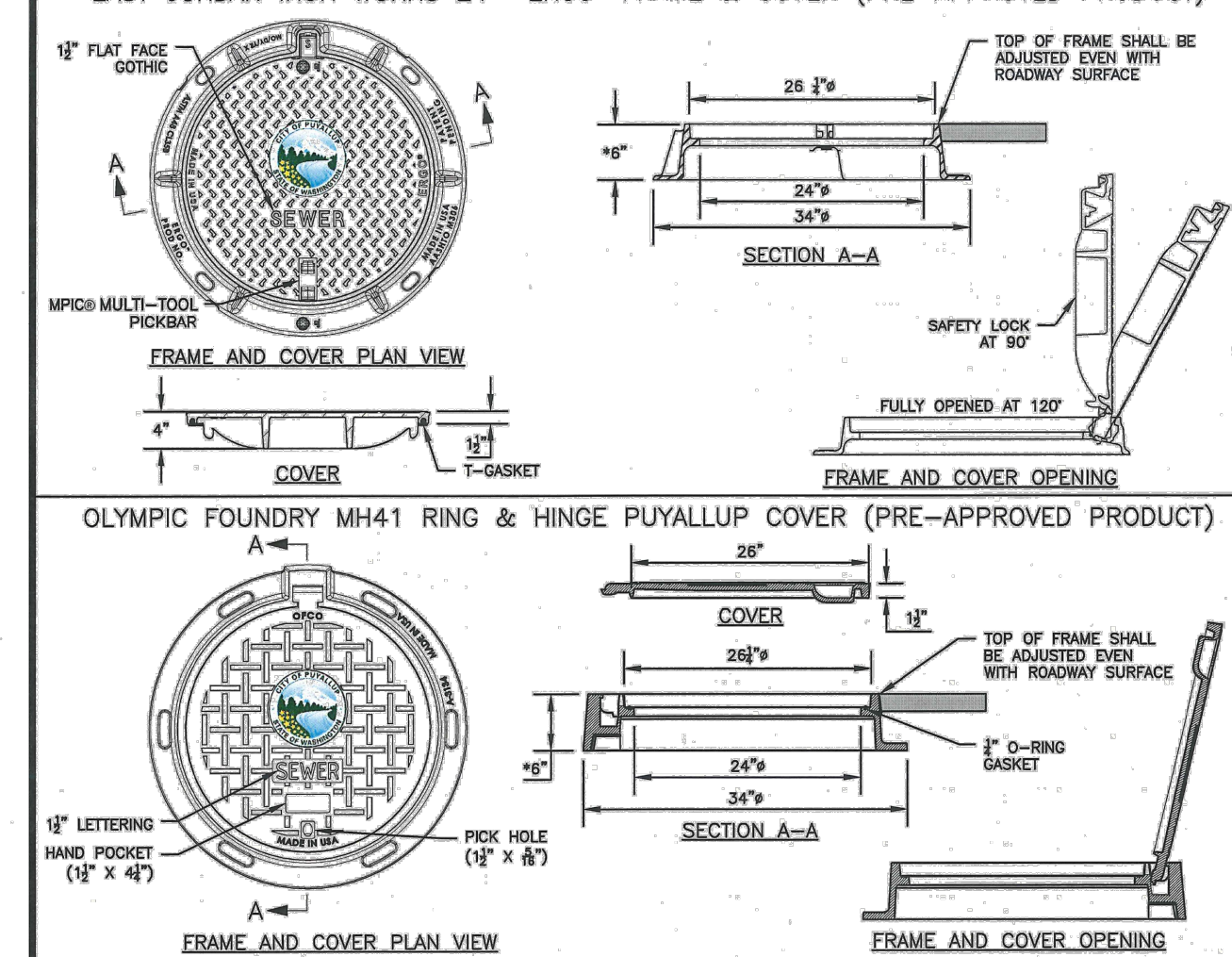


CITY OF PUYALLUP DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS	CATCH BASIN TYPE II		CITY STANDARD 02.01.04
	DESIGNED BY LINDA LAMM	CHECKED BY LINDA LAMM	



- NOTES:
- THE CONSTRUCTION AND INSTALLATION OF STORM SEWER MANHOLES SHALL CONFORM TO THE REQUIREMENTS OF WSJOT SPEC. SECTION 7-05 AND ASTM C 478.
  - THE FACE OF NEAT LINE CUTS IN EXISTING ASPHALT PAVEMENT SHALL BE JACK COATED AND THE TOP OF THE JOINT SHALL BE SEALED WITH A HOT PAVING GRADE ASPHALT.
  - PRECAST RISER SECTION OR PRECAST BASE WITH INTEGRAL RISER SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS WITH A MINIMUM WALL THICKNESS OF 2". THE SIZE OF THE KNOCKOUT SHALL BE EQUAL TO THE PIPE OUTER DIAMETER PLUS THE MANHOLE WALL THICKNESS. THE MAXIMUM HOLE SIZE IS 36" FOR A 48" MANHOLE, 42" FOR A 54" MANHOLE, 60" FOR A 72" MANHOLE, AND 84" FOR A 96" MANHOLE.
  - A FLEXIBLE GASKETED JOINT SHALL BE INSTALLED WITHIN 12" OF EACH CONNECTION TO A MANHOLE. THE CONNECTION OF CONCRETE OR DUCTILE IRON PIPE TO A MANHOLE SHALL BE CEMENT MORTARED. DUCTILE IRON PIPE SHALL BE SEALED WITH MASTIC AT THE CONNECTION POINT PRIOR TO BEING MORTARED. THE CONNECTION OF PVC PIPE TO A MANHOLE SHALL UTILIZE A MANHOLE COUPLING (SAND COLLAR) WITH A RUBBER GASKET.
  - THE MANHOLE COVER SHALL BE MARKED WITH "STORM" OR "DRAIN" IN 2 INCH RAISED LETTERS. MANHOLE RING AND COVER SHALL CONFORM TO CITY STANDARD DETAIL NO. 06.01.03
  - MANHOLE STEP AND LADDER SHALL CONFORM TO CITY STANDARD DETAILS NO. 06.01.04 AND 06.01.05

CITY OF PUYALLUP DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS	STORM SEWER MANHOLE		CITY STANDARD 02.01.01
	DESIGNED BY LINDA LAMM	CHECKED BY LINDA LAMM	



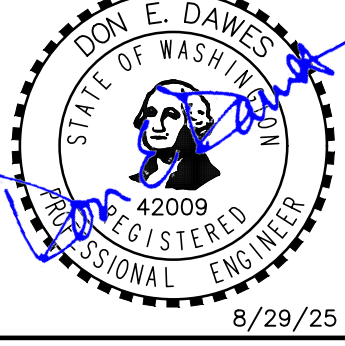
- NOTES:
- EAST JORDAN IRON WORKS 24" "ERGO" and OLYMPIC FOUNDRY MH41 RING & HINGE PUYALLUP COVER ARE PRE-APPROVED PRODUCTS AND SHALL BE USED FOR PUBLICLY-OWNED INFRASTRUCTURE. ALL OTHERS REQUIRE WRITTEN APPROVAL OF THE ENGINEER PRIOR TO INSTALLATION.
  - MANHOLE FRAME AND COVERS SHOULD NOT BE LOCATED IN PEDESTRIAN PATHWAYS (E.G. SIDEWALKS, CROSSWALKS, ETC.) WHERE EXISTING OR PROPOSED CONDITIONS REQUIRE A MANHOLE FRAME AND COVER TO BE INSTALLED WITHIN A PEDESTRIAN PATHWAY, THE MANHOLE FRAME AND COVER SHALL BE ADA COMPLIANT.
  - NON-ROCKING FIT FOR MANHOLE COVERS.
  - CASTING TO BE SMOOTH, TRUE TO PATTERN, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINK HOLES, WARP, OR ANY OTHER DEFECTS WHICH COULD IMPAIR SERVICEABILITY.
  - CASTINGS SHALL BE UNCOATED.
  - FOR STORM APPLICATIONS CAST LETTERS SHALL READ "STORM".
  - INSTALL FRAME AND COVER IN ROADWAY WITH HINGED SIDE OF ASSEMBLY POINTED TOWARD ONCOMING TRAFFIC.
  - THE CITY SHALL HAVE THE RIGHT TO REQUIRE INSPECTION AND APPROVAL OF ALL CASTINGS PRIOR TO PAINTING.
  - REPAIR OR DEFECTS BY WELDING, OR BY THE USE OF "SMOOTH-ON" OR SIMILAR MATERIAL WILL NOT BE PERMITTED.
  - MANHOLE RING AND COVER SHALL BE FREE OF POROSITY, SHRINK CAVITIES, COLD SHOTS OR CRACKS OR ANY SURFACE DEFECTS WHICH WOULD IMPAIR SERVICEABILITY.
  - FRAME HEIGHT MAY BE 4" FOR OVERLAYS AND PAVEMENT REHABILITATION PROJECTS, WITH WRITTEN APPROVAL BY THE CITY ENGINEER.

CITY OF PUYALLUP OFFICE OF THE CITY ENGINEER	MANHOLE FRAME AND COVER		CITY STANDARD 06.01.02
	DESIGNED BY LINDA LAMM	CHECKED BY LINDA LAMM	

CITY COMMENTS -- 07-13-21  
 • ADDED 06.01.02 SEWER DETAIL  
 • ADDED CoP APPROVAL STAMP

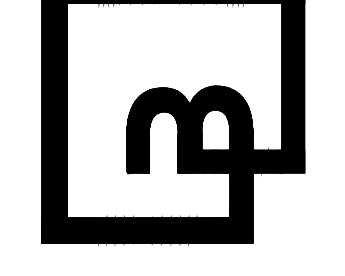
UTILITY DETAILS - ASBUILT  
 HERMWOOD SUITES

HERITAGE INN & SUITES OF PUYALLUP, LLC  
 4500 36TH AVE. S, SUITE 200  
 FARGO, NE 58104



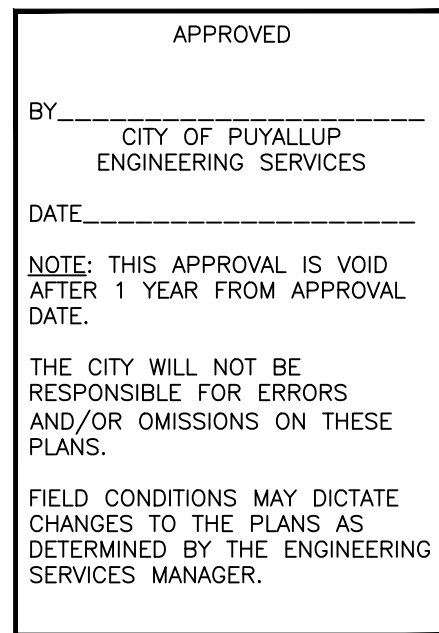
Scale: Horizontal N/A, Vertical N/A  
 Designed: DC, Drawn: DC, Checked: DD, Approved: DD, Date: 8/29/25

Barghausen Consulting Engineers, LLC.  
 18215 72nd Avenue South  
 Kent, WA 98032  
 425.251.6222  
 barghausen.com



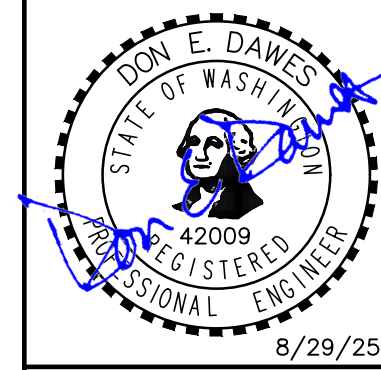
Job Number: 22507  
 Sheet: C-8.2  
 Date: 8/29/25





HERITAGE INN & SUITES OF  
PUYALLUP, LLC  
4500 36TH AVE. S, SUITE 200  
FARGO, NE 58104

For:



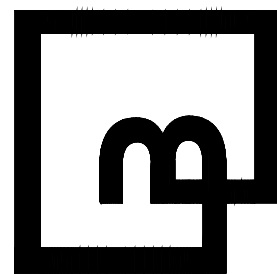
Scale:

Horizontal  
N/A

Vertical

Designed DC  
 Drawn DC  
 Checked DD  
 Approved DD  
 Date 8/29/25

**Barghausen**  
**Consulting Engineers, LLC.**  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222 **barghausen.com**

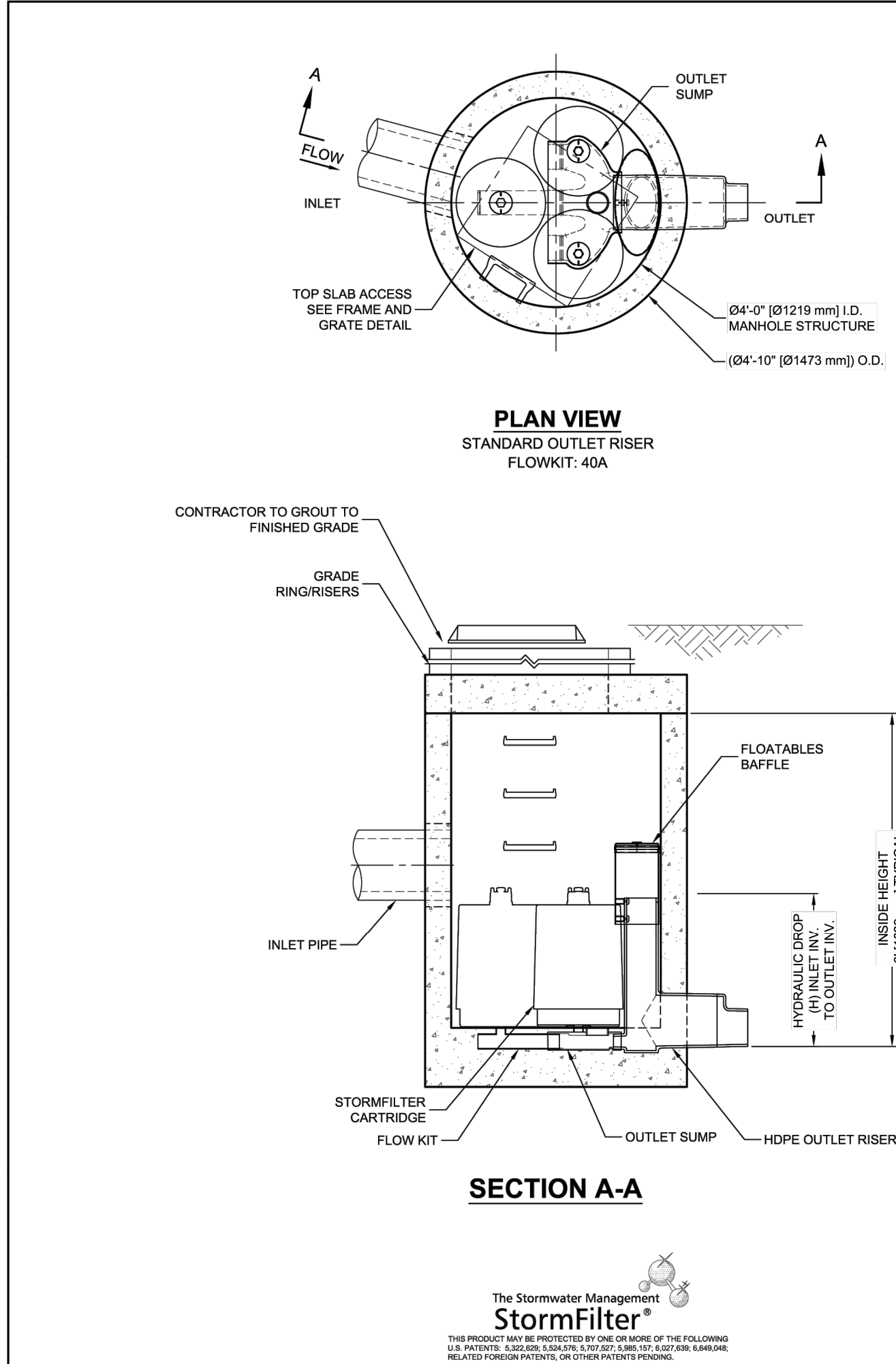


Job Number  
22507

C-8.3  
Sheet



L:\COMMON\CAD\TREATMENT\STANDARD\TERMS STANDARD DRAWINGS\STP\_MACHOWSKI\DWG - WP\STP\_MACHOWSKI.DWG 8/22/2017 4:18 PM



**STORMFILTER DESIGN NOTES**

STORMFILTER TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE SELECTION AND THE NUMBER OF CARTRIDGES. THE STANDARD MANHOLE STYLE IS SHOWN WITH THE MAXIMUM NUMBER OF CARTRIDGES (3). VOLUME SYSTEM IS ALSO AVAILABLE WITH MAXIMUM 3 CARTRIDGES. Ø4" (1219 mm) MANHOLE STORMFILTER PEAK HYDRAULIC CAPACITY IS 1.0 CFS (28.3 L/s). IF THE SITE CONDITIONS EXCEED 1.0 CFS (28.3 L/s) AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

**CARTRIDGE SELECTION**

CARTRIDGE HEIGHT	2" (50.8 mm)	18" (458 mm)	LOW DROP
RECOMMENDED HYDRAULIC DROP (H)	3.05' (930 mm)	2.3' (700 mm)	1.8' (550 mm)
SPECIFIC FLOW RATE (gpm/ft) [L/m <sup>2</sup> ]	2.1 (30)	1.67 (1.08)	1.67 (1.08)
CARTRIDGE FLOW RATE (gpm) [L/s]	22.5 (1.42)	18.79 (1.19)	12.53 (0.79)

\* 1.67 gpm/ft (1.08 L/m<sup>2</sup>) SPECIFIC FLOW RATE IS APPROVED WITH PHOSPHOSORB® (PSORB) MEDIA ONLY

**STORM FILTER FOR EAST BASIN**

CARTRIDGE HEIGHT	2" (50.8 mm)	18" (458 mm)	LOW DROP
RECOMMENDED HYDRAULIC DROP (H)	3.05' (930 mm)	2.3' (700 mm)	1.8' (550 mm)
SPECIFIC FLOW RATE (gpm/ft) [L/m <sup>2</sup> ]	2.1 (30)	1.67 (1.08)	1.67 (1.08)
CARTRIDGE FLOW RATE (gpm) [L/s]	22.5 (1.42)	18.79 (1.19)	12.53 (0.79)

\* 1.67 gpm/ft (1.08 L/m<sup>2</sup>) SPECIFIC FLOW RATE IS APPROVED WITH PHOSPHOSORB® (PSORB) MEDIA ONLY

**30" [762] SQ. FRAME AND GRATE**  
(ALSO AVAILABLE IN ROUND)  
N.T.S.

**GENERAL NOTES**

- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- DIMENSIONS MARKED WITH ( ) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
- FOR SITE SPECIFIC DRAWINGS WITH DETAILED VAULT DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. [www.contechES.com](http://www.contechES.com)
- STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
- STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 5' (1524 mm) AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M308 AND BE CAST WITH THE CONTECH LOGO.
- FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF CLEANING. RADIAL MEDIA DEPTH SHALL BE 7-INCHES (178 mm). FILTER MEDIA CONTACT TIME SHALL BE AT LEAST 38 SECONDS.
- SPECIFIC FLOW RATE IS EQUAL TO THE FILTER TREATMENT CAPACITY (gpm) [L/s] DIVIDED BY THE FILTER CONTACT SURFACE AREA (sq ft) [m<sup>2</sup>].
- STORMFILTER STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

**INSTALLATION NOTES**

A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.

B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE.

C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.

D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET PIPE(S).

E. CONTRACTOR TO PROVIDE AND INSTALL CONNECTOR TO THE OUTLET RISER STUB. STORMFILTER EQUIPPED WITH A DUAL DIAMETER HDPPE OUTLET STUB AND SAND COLLAR. IF OUTLET PIPE IS LARGER THAN 8 INCHES (200 mm), CONTRACTOR TO REMOVE THE 8 INCH (200 mm) OUTLET STUB AT MOLDED-IN CUT LINE. COUPLING BY FERROD OR EQUAL AND PROVIDED BY CONTRACTOR.

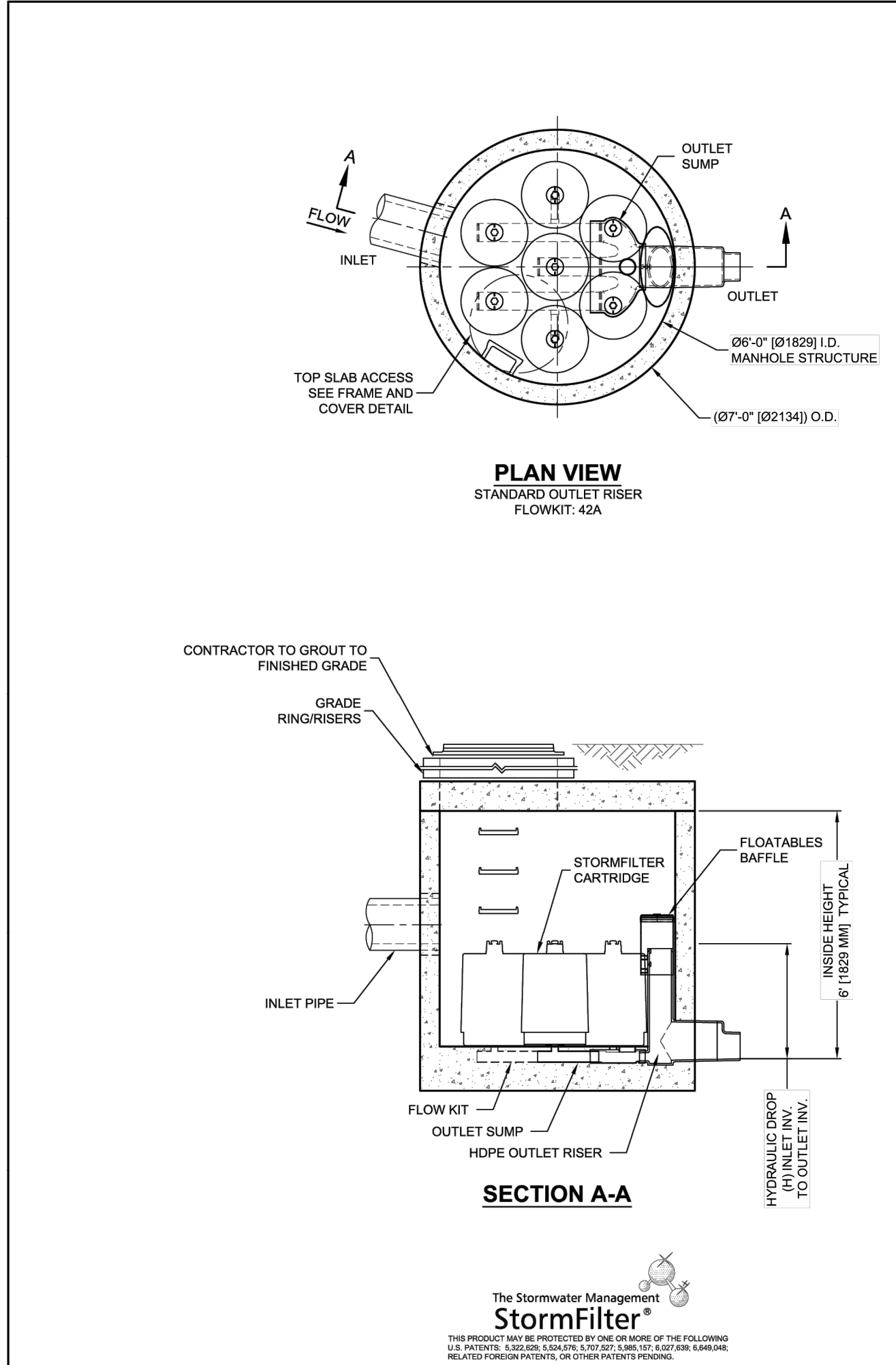
F. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.

**SITE SPECIFIC DATA REQUIREMENTS**

STRUCTURE ID	CB89
WATER QUALITY FLOW RATE (cfs) [L/s]	0.0489
PEAK FLOW RATE (cfs) [L/s]	0.4898
RETURN PERIOD OF PEAK FLOW (yrs)	100
CARTRIDGE HEIGHT (SEE TABLE ABOVE)	18"
NUMBER OF CARTRIDGES REQUIRED	3
CARTRIDGE FLOW RATE	7.5
MEDIA TYPE (PERLITE, ZPG, PSORB)	ZPG
PIPE DATA:	I.E. MATERIAL DIAMETER
INLET PIPE #1	" "
INLET PIPE #2	" "
OUTLET PIPE	416.49 N-12 12"
RIM ELEVATION	419.99
ANTI-FLOTATION BALLAST	WIDTH HEIGHT
NOTES/SPECIAL REQUIREMENTS:	" "
* PER ENGINEER OF RECORD	

**CONTECH**  
ENGINEERED SOLUTIONS LLC  
[www.contechES.com](http://www.contechES.com)  
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45399  
800-338-1122 513-845-7000 513-845-7993 FAX

SFMH48  
STORMFILTER  
STANDARD DETAIL



**STORMFILTER DESIGN NOTES**

STORMFILTER TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE SELECTION AND THE NUMBER OF CARTRIDGES. THE STANDARD MANHOLE STYLE IS SHOWN WITH THE MAXIMUM NUMBER OF CARTRIDGES (7). VOLUME SYSTEM IS ALSO AVAILABLE WITH MAXIMUM 7 CARTRIDGES. Ø6'-0" (1829 mm) MANHOLE STORMFILTER PEAK HYDRAULIC CAPACITY IS 1.5 CFS (42.5 L/s). IF THE SITE CONDITIONS EXCEED 1.5 CFS (42.5 L/s) AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

**CARTRIDGE SELECTION**

CARTRIDGE HEIGHT	2" (50.8 mm)	18" (458 mm)	LOW DROP
RECOMMENDED HYDRAULIC DROP (H)	3.05' (930 mm)	2.3' (700 mm)	1.8' (550 mm)
SPECIFIC FLOW RATE (gpm/ft) [L/m <sup>2</sup> ]	2.1 (30)	1.67 (1.08)	1.67 (1.08)
CARTRIDGE FLOW RATE (gpm) [L/s]	22.5 (1.42)	18.79 (1.19)	12.53 (0.79)

\* 1.67 gpm/ft (1.08 L/m<sup>2</sup>) SPECIFIC FLOW RATE IS APPROVED WITH PHOSPHOSORB® (PSORB) MEDIA ONLY

**PREFERRED STORM FILTER FOR WEST BASIN**

CARTRIDGE HEIGHT	2" (50.8 mm)	18" (458 mm)	LOW DROP
RECOMMENDED HYDRAULIC DROP (H)	3.05' (930 mm)	2.3' (700 mm)	1.8' (550 mm)
SPECIFIC FLOW RATE (gpm/ft) [L/m <sup>2</sup> ]	2.1 (30)	1.67 (1.08)	1.67 (1.08)
CARTRIDGE FLOW RATE (gpm) [L/s]	22.5 (1.42)	18.79 (1.19)	12.53 (0.79)

\* 1.67 gpm/ft (1.08 L/m<sup>2</sup>) SPECIFIC FLOW RATE IS APPROVED WITH PHOSPHOSORB® (PSORB) MEDIA ONLY

**FRAME AND COVER**  
(DIAMETER VARIES)  
N.T.S.

**SITE SPECIFIC DATA REQUIREMENTS**

STRUCTURE ID	ST#1
WATER QUALITY FLOW RATE (cfs) [L/s]	0.1105
PEAK FLOW RATE (cfs) [L/s]	1.1031
RETURN PERIOD OF PEAK FLOW (yrs)	100
CARTRIDGE HEIGHT (SEE TABLE ABOVE)	18"
NUMBER OF CARTRIDGES REQUIRED	7
CARTRIDGE FLOW RATE	7.5
MEDIA TYPE (PERLITE, ZPG, PSORB)	ZPG
PIPE DATA:	I.E. MATERIAL DIAMETER
INLET PIPE #1	413.34 N-12 12"
INLET PIPE #2	" "
OUTLET PIPE	411.05 N-12 12"
RIM ELEVATION	421.84
ANTI-FLOTATION BALLAST	WIDTH HEIGHT
NOTES/SPECIAL REQUIREMENTS:	" "
* PER ENGINEER OF RECORD	

**GENERAL NOTES**

- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- DIMENSIONS MARKED WITH ( ) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
- FOR SITE SPECIFIC DRAWINGS WITH DETAILED VAULT DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. [www.contechES.com](http://www.contechES.com)
- STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
- STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 5' (1524 mm) AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M308 AND BE CAST WITH THE CONTECH LOGO.
- FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF CLEANING. RADIAL MEDIA DEPTH SHALL BE 7-INCHES (178 mm). FILTER MEDIA CONTACT TIME SHALL BE AT LEAST 38 SECONDS.
- SPECIFIC FLOW RATE IS EQUAL TO THE FILTER TREATMENT CAPACITY (gpm) [L/s] DIVIDED BY THE FILTER CONTACT SURFACE AREA (sq ft) [m<sup>2</sup>].
- STORMFILTER STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

**INSTALLATION NOTES**

A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.

B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE.

C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.

D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET PIPE(S).

E. CONTRACTOR TO PROVIDE AND INSTALL CONNECTOR TO THE OUTLET RISER STUB. STORMFILTER EQUIPPED WITH A DUAL DIAMETER HDPPE OUTLET STUB AND SAND COLLAR. IF OUTLET PIPE IS LARGER THAN 8 INCHES (200 mm), CONTRACTOR TO REMOVE THE 8 INCH (200 mm) OUTLET STUB AT MOLDED-IN CUT LINE. COUPLING BY FERROD OR EQUAL AND PROVIDED BY CONTRACTOR.

F. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.

**CONTECH**  
ENGINEERED SOLUTIONS LLC  
[www.contechES.com](http://www.contechES.com)  
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45399  
800-338-1122 513-845-7000 513-845-7993 FAX

SFMH72  
STORMFILTER  
STANDARD DETAIL



CITY & WATER COMMENTS - 11-05-21  
• ADDED PLAN SHEET FOR STORMWATER PRODUCT MANUFACTURER DETAILS

Δ	No.	Date	By	Ckd.	Appr.	DD	DD	REVISION PER SITE PLAN CHANGES
		2/15/25						

Title:

HERITAGE INN & SUITES OF  
PUYALLUP, LLC  
4500 36TH AVE. S, SUITE 200  
FARGO, NE 58104

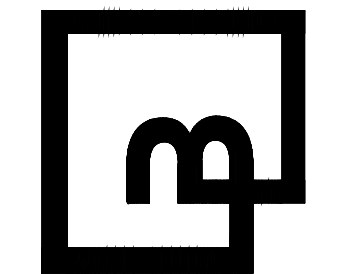
For:



Scale:  
Horizontal N/A  
Vertical N/A

Designed DC  
Drawn DC  
Checked DD  
Approved DD  
Date 8/29/25

**Barghausen**  
Consulting Engineers, LLC.  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222 [barghausen.com](http://barghausen.com)



Job Number  
22507

Sheet  
C-8.4 of 8





#### MC-3500 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH MC-3500.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
  - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
  - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
  - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/IN, AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED, UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
  - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
  - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
  - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

#### IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-3500 CHAMBER SYSTEM

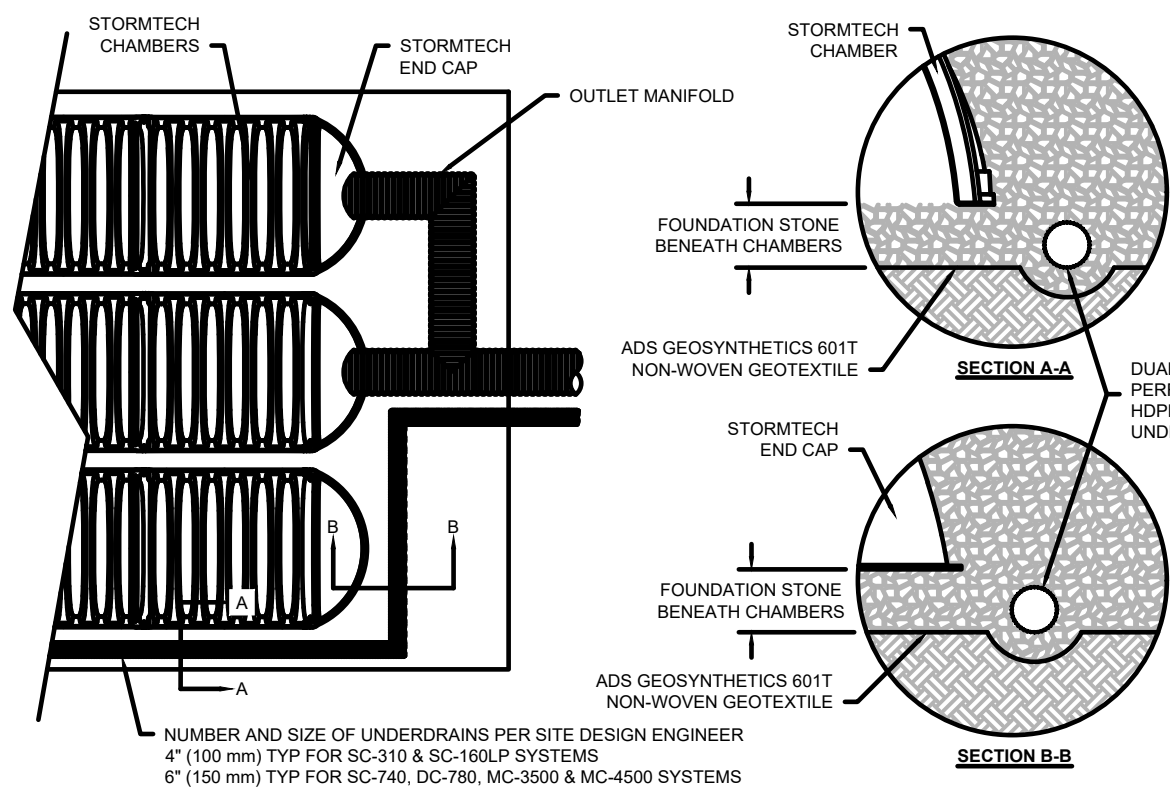
- STORMTECH MC-3500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
  - STONEHOPPER LOCATED OFF THE CHAMBER BED.
  - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
  - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELLED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM - SPACING BETWEEN THE CHAMBER ROWS.
- INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43 DESIGNATION OF #3 OR #4.
- STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

#### NOTES FOR CONSTRUCTION EQUIPMENT

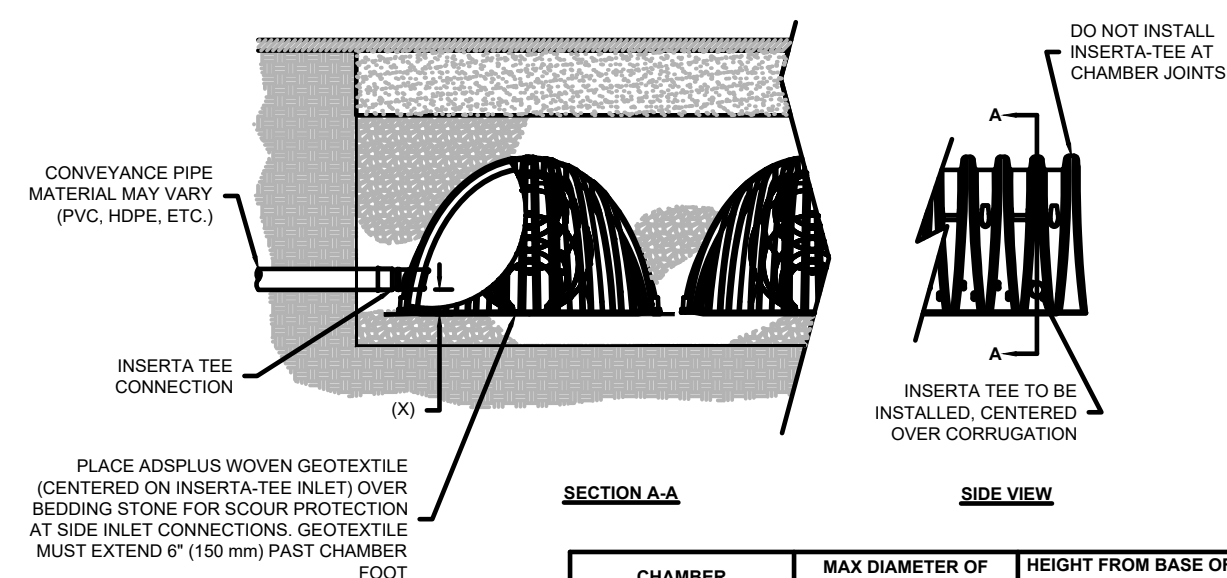
- STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- THE USE OF EQUIPMENT OVER MC-3500 CHAMBERS IS LIMITED:
  - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
  - NO RUBBER TIED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
  - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-882-2684 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.



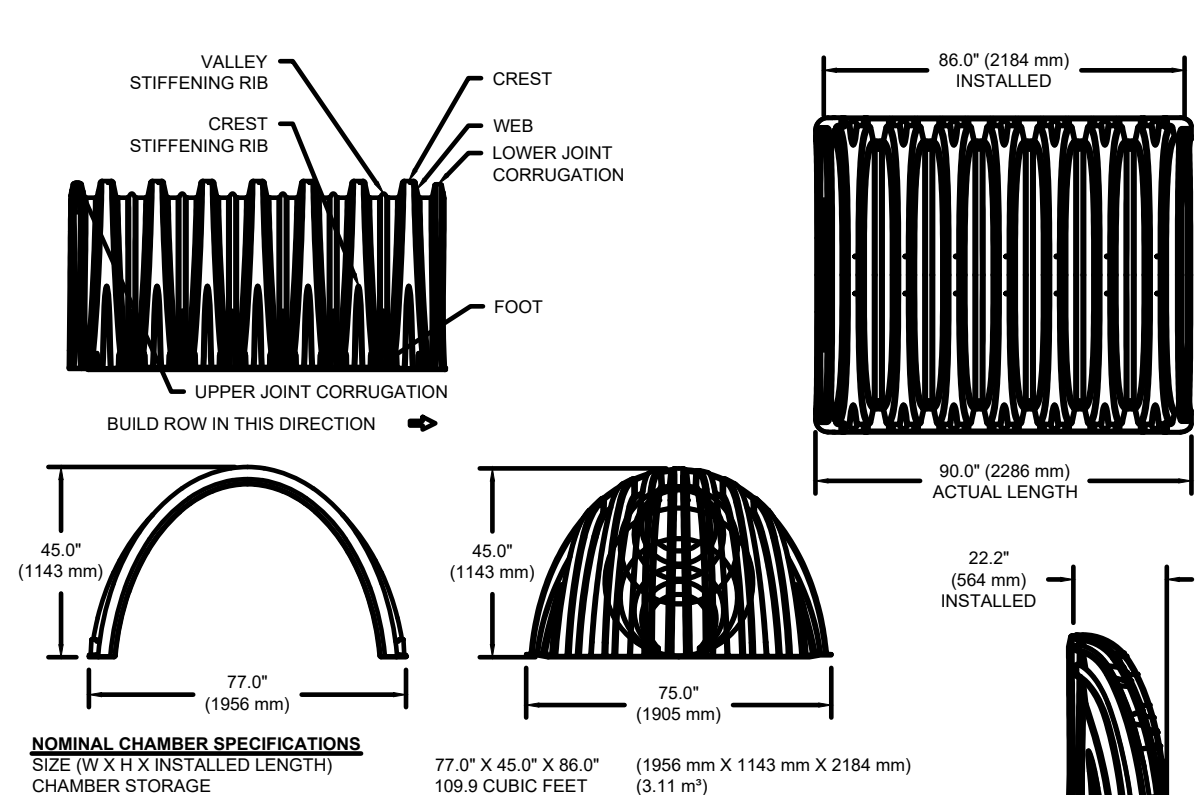
#### 5 UNDERDRAIN DETAIL



CHAMBER	MAX DIAMETER OF INSERTA TEE	HEIGHT FROM BASE OF CHAMBER (X)
SC-310	6" (150 mm)	4" (100 mm)
SC-740	10" (250 mm)	4" (100 mm)
DC-710	10" (250 mm)	4" (100 mm)
MC-3500	12" (300 mm)	8" (200 mm)
MC-4500	12" (300 mm)	8" (200 mm)

NOTE: PART NUMBERS WILL VARY BASED ON INLET PIPE MATERIALS. CONTACT STORMTECH FOR MORE INFORMATION.

#### 6 INSERTA-TEE SIDE INLET DETAIL



#### 2 MC-3500 TECHNICAL SPECIFICATIONS

PART #	STUB	B	C
MC3500IEP06T	6" (150 mm)	33.21" (844 mm)	0.66" (17 mm)
MC3500IEP06B	6" (150 mm)	31.10" (791 mm)	0.81" (21 mm)
MC3500IEP08T	8" (200 mm)	28.04" (713 mm)	0.83" (21 mm)
MC3500IEP08B	8" (200 mm)	26.30" (667 mm)	1.35" (34 mm)
MC3500IEP10T	10" (250 mm)	23.30" (593 mm)	1.50" (38 mm)
MC3500IEP10B	10" (250 mm)	20.03" (509 mm)	1.77" (45 mm)
MC3500IEP12B	12" (300 mm)	14.48" (368 mm)	2.06" (52 mm)
MC3500IEP15T	15" (375 mm)	10.48" (267 mm)	2.75" (70 mm)
MC3500IEP15B	15" (375 mm)	10.48" (267 mm)	2.75" (70 mm)
MC3500IEP18TW	18" (450 mm)	10.48" (267 mm)	2.75" (70 mm)
MC3500IEP18BC	18" (450 mm)	10.48" (267 mm)	2.75" (70 mm)
MC3500IEP18TW	18" (450 mm)	10.48" (267 mm)	2.75" (70 mm)
MC3500IEP24TW	24" (600 mm)	10.48" (267 mm)	2.75" (70 mm)
MC3500IEP24BC	24" (600 mm)	10.48" (267 mm)	2.75" (70 mm)
MC3500IEP24TW	24" (600 mm)	10.48" (267 mm)	2.75" (70 mm)
MC3500IEP24BC	24" (600 mm)	10.48" (267 mm)	2.75" (70 mm)
MC3500IEP30BC	30" (750 mm)	10.48" (267 mm)	2.75" (70 mm)

NOTE: ALL DIMENSIONS ARE NOMINAL.

#### MC-3500 STANDARD DETAILS

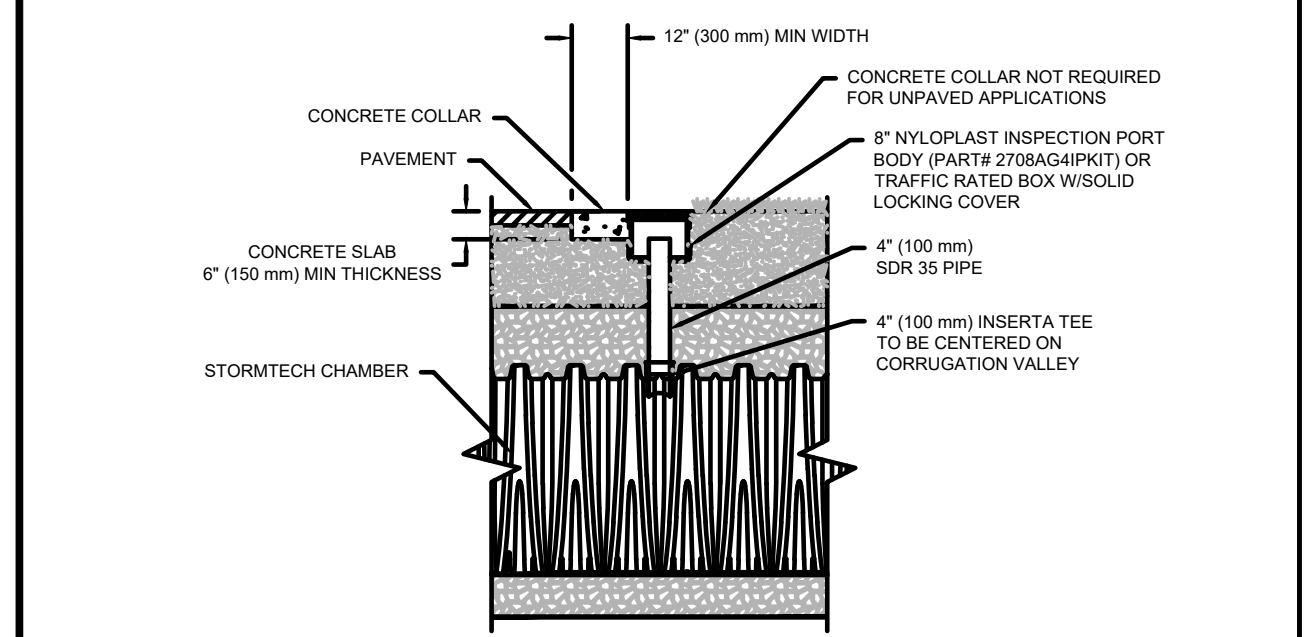
#### INSPECTION & MAINTENANCE

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

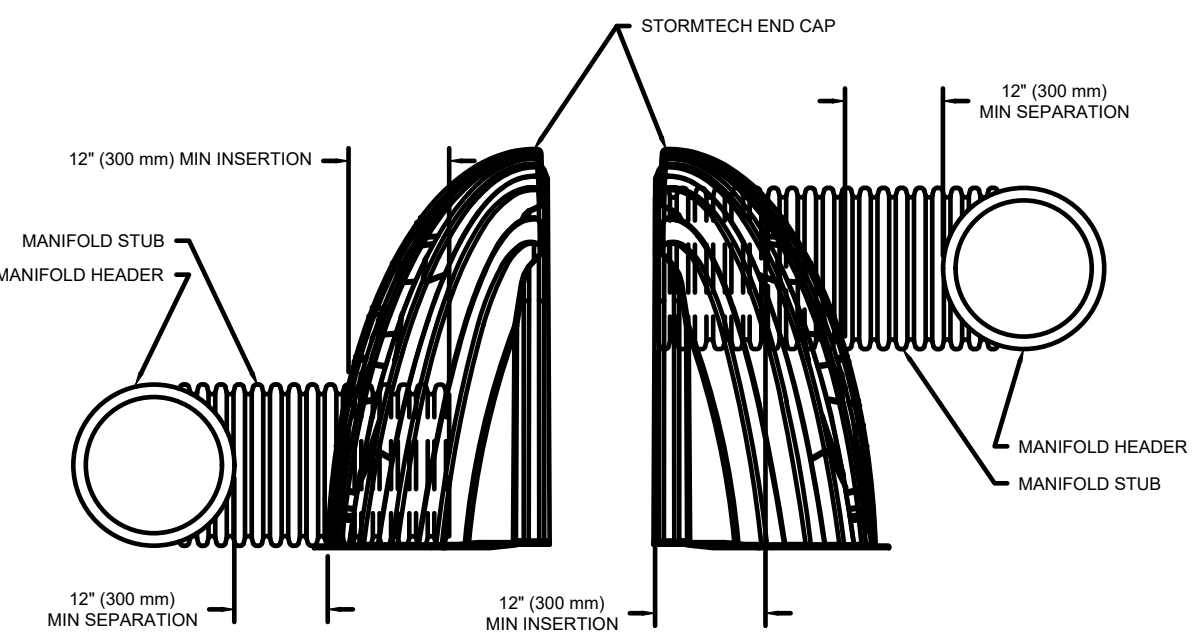
#### NOTES

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

#### 3 MC-3500 ISOLATOR ROW PLUS DETAIL



NOTE: INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION VALLEY.



NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.

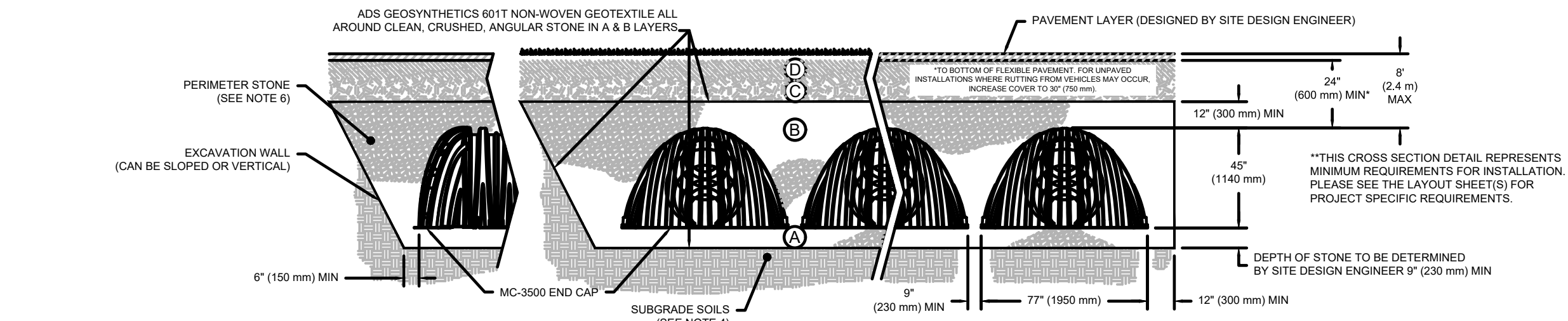
#### 4 4" PVC INSPECTION PORT DETAIL (MC SERIES CHAMBER)

#### 7 MC-SERIES END CAP INSERTION DETAIL

#### ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145 <sup>1</sup> A-1, A-2, A-3 OR AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 88, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 98% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 98% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 <sup>1</sup> 3, 4	NO COMPACTION REQUIRED
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 <sup>1</sup> 3, 4	PLATE COMPACTION OR ROLL TO ACHIEVE A FLAT SURFACE. <sup>2,3</sup>

- PLEASE NOTE:
- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
  - STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERSAGES WITH A VIBRATORY COMPACTOR.
  - WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAMMING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
  - ONCE LAYER 'C' IS PLACED, ANY SOIL MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



#### NOTES:

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
- MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
  - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
  - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
  - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/IN, AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

#### 1 MC-3500 CROSS SECTION DETAIL



4640 TRUEMAN BLVD  
HILLIARD, OH 43026

SHEET

APPROVED

BY: \_\_\_\_\_ CITY OF PUYALLUP  
ENGINEERING SERVICES

DATE: \_\_\_\_\_

NOTE: THIS APPROVAL IS VOID  
AFTER 1 YEAR FROM APPROVAL  
DATE.

THE CITY WILL NOT BE  
RESPONSIBLE FOR ERRORS  
AND/OR OMISSIONS ON THESE  
PLANS.

FIELD CONDITIONS MAY DICTATE  
CHANGES TO THE PLANS AS  
DETERMINED BY THE ENGINEERING  
SERVICES MANAGER.

UTILITY DETAILS - ASBUILT

HOMewood SUITES

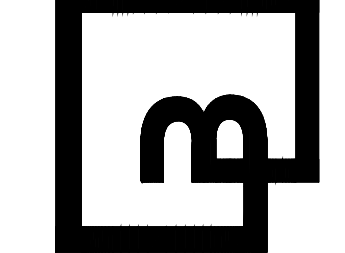
HERITAGE INN & SUITES OF  
PUYALLUP, LLC  
4500 36TH AVE. S, SUITE 200  
FARGO, NE 58104



Scale: Horizontal N/A Vertical N/A

Designed: DC Drawn: DC Checked: DC Approved: DC Date: 8/29/25

Barghausen Consulting Engineers, LLC.  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222 barghausen.com



Job Number 22507  
Sheet  
C-8.5 8

CITY & WATER COMMENTS - 11-05-21  
ADDED PLAN SHEET FOR STORMWATER  
PRODUCT MANUFACTURER DETAILS