

# HARTSON AND HAVANA- PHASE 2

IN THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 22,  
TOWNSHIP 25 NORTH, RANGE 43 EAST, WILLAMETTE MERIDIAN  
CITY OF SPOKANE, WASHINGTON  
PERMIT NO. B21M0110PDEV



## EXISTING CONDITIONS AND DEMOLITION PLAN

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## DEMOLITION NOTES

- (150) PROTECT EXISTING TREE.
- (151) REMOVE EXISTING BUSHES.
- (152) SAWCUT EXISTING ASPHALT TO FORM A CLEAN, COMPETENT EDGE. MATCH NEW ASPHALT. PROTECT EXISTING UTILITIES DURING CONSTRUCTION.
- (153) REMOVE SHOP STRUCTURE AND DISPOSE OFF-SITE.
- (154) DISCONNECT EXISTING SEWER SERVICES AND CONNECT TO PROPOSED SEWER MAIN. SEE SHEET C4.0 AND C4.1 FOR MORE INFORMATION.
- (155) PROTECT EXISTING ASPHALT AND CURB.
- (156) DISCONNECT EXISTING WATER SERVICES AND CONNECT TO PROPOSED WATER MAIN. SEE SHEET C4.2 FOR MORE INFORMATION.
- (157) CONTRACTOR TO ASSESS REMOVAL OF TREE WITH OWNER AT TIME OF CONSTRUCTION.

SITE ADDRESS

4235 E HARTSON AVE  
SPOKANE, WA 99207  
PARCEL #: 35221.2627

OWNER

NORTHWEST HOUSES, LLC.  
ATTN: DAVID CLINTON  
TEL: 208.262.4999  
EMAIL: DAVID@INVESTORNORTHWEST.US.

ENGINEER

SYNTIER ENGINEERING, INC  
ATTN: TOM STRILING  
405 SE BRELSFORD DR. SUITE C  
PULLMAN, WA 99163  
TEL: 509.339.6187  
EMAIL: TOM@SYNTIERENGR.COM

## SEWER MAINTENANCE

CITY OF SPOKANE  
909 E SPRAGUE AVENUE  
SPOKANE, WA 99202  
PHONE: 509-625-7900

WATER

CITY OF SPOKANE  
914 E NORTH FOOTHILLS DRIVE  
SPOKANE, WA 99201  
PHONE: 509-625-7800  
CONTACT: JAMES SAKAMOTO, P.E.

## INSPECTION

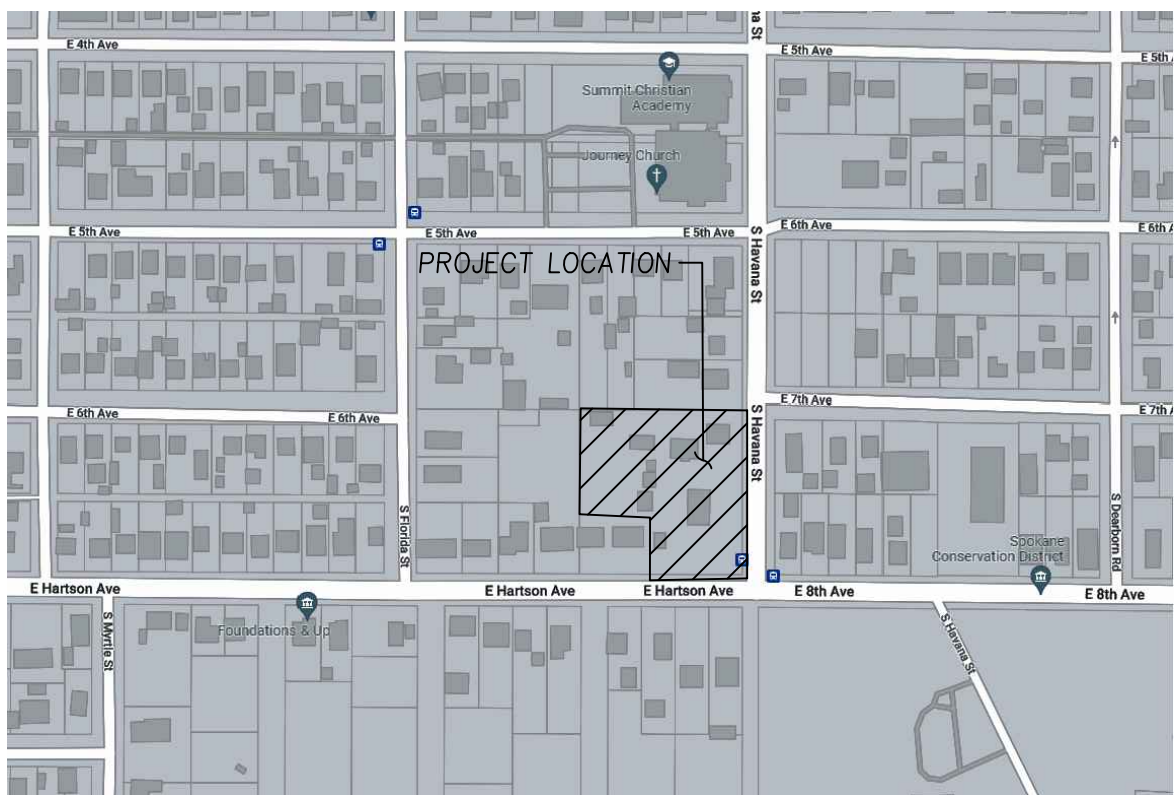
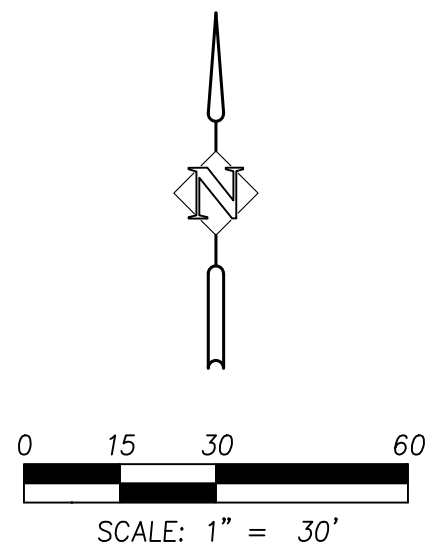
CITY OF SPOKANE  
1423 NORTH NORMANDIE  
SPOKANE, WA 99201  
PHONE: 509-625-7722  
CONTACT: KELLY HEITSTUMAN

DATUM

VERTICAL DATUM - NAVD88

### UTILITY STATEMENT

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED AS ACCURATELY AS POSSIBLE FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. SYNTIER ENGINEERING, INC. MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. FURTHER, WE DO NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN EXACT LOCATION INDICATED, ALTHOUGH WE DO CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE.



VICINITY MAP  
N.T.S

## GENERAL CONSTRUCTION NOTES

1. ALL MATERIALS, WORKMANSHIP, TESTING AND CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE MOST RECENT WASHINGTON STATE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, THE CITY OF SPOKANE STANDARDS AND THE CITY OF SPOKANE GENERAL SPECIAL PROVISIONS FOR PRIVATE CONTRACTS.
2. NO REVISIONS SHALL BE MADE TO THE PLANS WITHOUT APPROVAL FROM THE CITY OF SPOKANE AND THE DESIGN ENGINEER OF RECORD.
3. THE CONTRACTOR SHALL PROVIDE THE DESIGN ENGINEER WITH RECORD DRAWINGS PRIOR TO FINAL APPROVAL. ALL DEVIATIONS FROM THE ORIGINAL PLANS MADE DURING THE COURSE OF CONSTRUCTION, INCLUDING LOCATIONS, INVERTS AND DEPTHS OF UTILITIES SHALL BE CLEARLY MARKED ON THE RECORD DRAWINGS.
4. ALL APPROVALS AND PERMITS REQUIRED BY THE CITY OF SPOKANE SHALL BE OBTAINED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. AN OBSTRUCTION PERMIT IS REQUIRED FOR ALL WORK WITHIN THE CITY RIGHT-OF-WAY.
5. THE CONTRACTOR SHALL PLACE MARKING TAPE IN THE EXCAVATION TRENCH AT MID-DEPTH LOCATION FOR ALL UNDERGROUND SIDE SERVICE INSTALLATIONS FOR THE PURPOSE OF ALERTING ANY FUTURE EXCAVATION IN THE SPECIFIC AREA.
6. ALL CRACKED OR BROKEN CURB AND SIDEWALK WITH BE REPAIRED OR REPLACED WHETHER EXISTING OR CAUSED BY CONSTRUCTION.
7. THE CONTRACTOR SHALL CONTACT THE DEPARTMENT OF ENGINEERING SERVICES CONSTRUCTION MANAGEMENT OFFICE, 1423 NORTH NORMANDIE STREET, 509-625-7722 TO ARRANGE A MUTUALLY AGREEABLE "START WORK DATE".
8. PRIOR TO BACKFILL, ALL MAINS AND APPURTENANCES SHALL BE INSPECTED AND APPROVED BY THE CITY OF SPOKANE CONSTRUCTION INSPECTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY FOR ANY REQUIRED INSPECTIONS.
9. ELEVATIONS ARE BASED UPON NAVD 88 DATUM. TO CONVERT TO OLD CITY DATUM ADD 13.13'.

# TOPOGRAPHIC SURVEY NOTES

1. VERTECAL DATUM - NAVD88
2. ALL EXISTING UTILITIES SHOWN ON PLANS ARE TO BE VERIFIED HORIZONTALLY AND VERTICALLY PRIOR TO ANY CONSTRUCTION. ALL EXISTING FEATURES INCLUDING BURIED UTILITIES ARE SHOWN AS INDICATED ON RECORD MAPS AND LOCATES FOUND UPON TIME OF FIELD SURVEY. WE ASSUME NO LIABILITY FOR THE ACCURACY OF THOSE RECORDS AND SURVEYS. CONTACT THE UTILITY OWNER/AGENCY FOR THE FINAL LOCATION OF EXISTING UTILITIES IN AREAS CRITICAL TO CONSTRUCTION.
3. TOPOGRAPHIC SURVEY GENERATED FOR CIVIL ENGINEERING DESIGN PURPOSES.
4. CONTOURS ARE DERIVED FROM TOPOGRAPHIC SURVEY INFORMATION.

## DEMOLITION NOTES

1. ALL EXISTING STRUCTURES, TREES, SHRUBS, ASPHALT AND CONCRETE ARE TO BE REMOVED FROM SITE UNLESS OTHERWISE SHOWN OR DIRECTED. CONTRACTOR SHALL REMOVE ALL WASTE MATERIAL AND DEBRIS FROM SITE AND DISPOSE OF LEGALLY IN SUITABLE LOCATIONS OFFSITE.
2. CONTRACTOR SHALL OBTAIN ALL CONSTRUCTION APPROVALS/PERMITS FOR THE PROJECT SITE FROM THE CITY OF SPOKANE, AND OTHER GOVERNING AGENCIES PRIOR TO ANY CONSTRUCTION ACTIVITY.
3. CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE ANY AND ALL ITEMS NOT OTHERWISE LISTED HEREIN THAT CONFLICT WITH THE CONSTRUCTION OF THE PROJECT. CONTRACTOR SHALL CONTACT PROJECT MANAGER IMMEDIATELY UPON ENCOUNTERING ITEM TO DETERMINE ANY ITEMS NOT SHOWN ON THE PLANS THAT MUST BE REMOVED. FAILURE TO DO SO DOES NOT RELIEVE CONTRACTOR OF COST RESPONSIBILITY FOR REMOVING ITEMS REQUIRED.
4. LOCATION OF ALL UNDERGROUND UTILITIES ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. CONTRACTOR SHALL VERIFY CONNECTION POINTS WITH EXISTING UTILITIES. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO EXISTING UTILITIES AND UTILITY STRUCTURES THAT ARE TO REMAIN. RECORD LINE CAPPING LOCATIONS AND ACCURATE UTILITY LOCATIONS (HORIZONTAL & VERTICAL) WITH DIMENSION STRINGS TO PERMANENT LANDMARKS ON AS-BUILT PLAN.
5. CONTRACTOR SHALL SUBMIT A WRITTEN PEDESTRIAN PROTECTION PLAN TO THE CITY OF SPOKANE AND PROVIDE ALL SIGNS AND BARRICADES REQUIRED TO CLOSE PARKING AND ROADWAY AREAS, REDIRECT TRAFFIC AND PEDESTRIANS, AND PROVIDE ADVANCE WARNING AND INSURE PUBLIC SAFETY. TEMPORARY SIGNS AND BARRICADES SHALL BE PER WSDOT STANDARD SPECIFICATIONS AND IN ACCORDANCE WITH IBC SECTION 3306. NO HAND PAINTED SIGNS WILL BE ALLOWED.
6. CONTRACTOR SHALL PROTECT ALL EXISTING PROPERTY CORNERS & MONUMENTS. ANY DAMAGE CAUSED BY THE CONSTRUCTION ACTIVITIES SHALL BE REMEDIED AT THE CONTRACTOR'S EXPENSE PER APPLICABLE DNR REQUIREMENTS.

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COVER SHEET

# HARTSON AND HAVANA PHASE 2

CITY OF SPOKANE

**SynTier**  
Engineering, Inc.  
405 SE Brelsford Drive, Suite C Pullman, WA 99163  
[www.SynTierEng.com](http://www.SynTierEng.com) 509.339.6187



DESIGNED:	TKS/GAG
DRAWN:	GAG
CHECKED:	SAS
DATE:	JUNE 9, 2022

SHEET NO

# C1.0

1 OF 9

JOB NO

PMC-11



DESIGNED:	TKS/GAG
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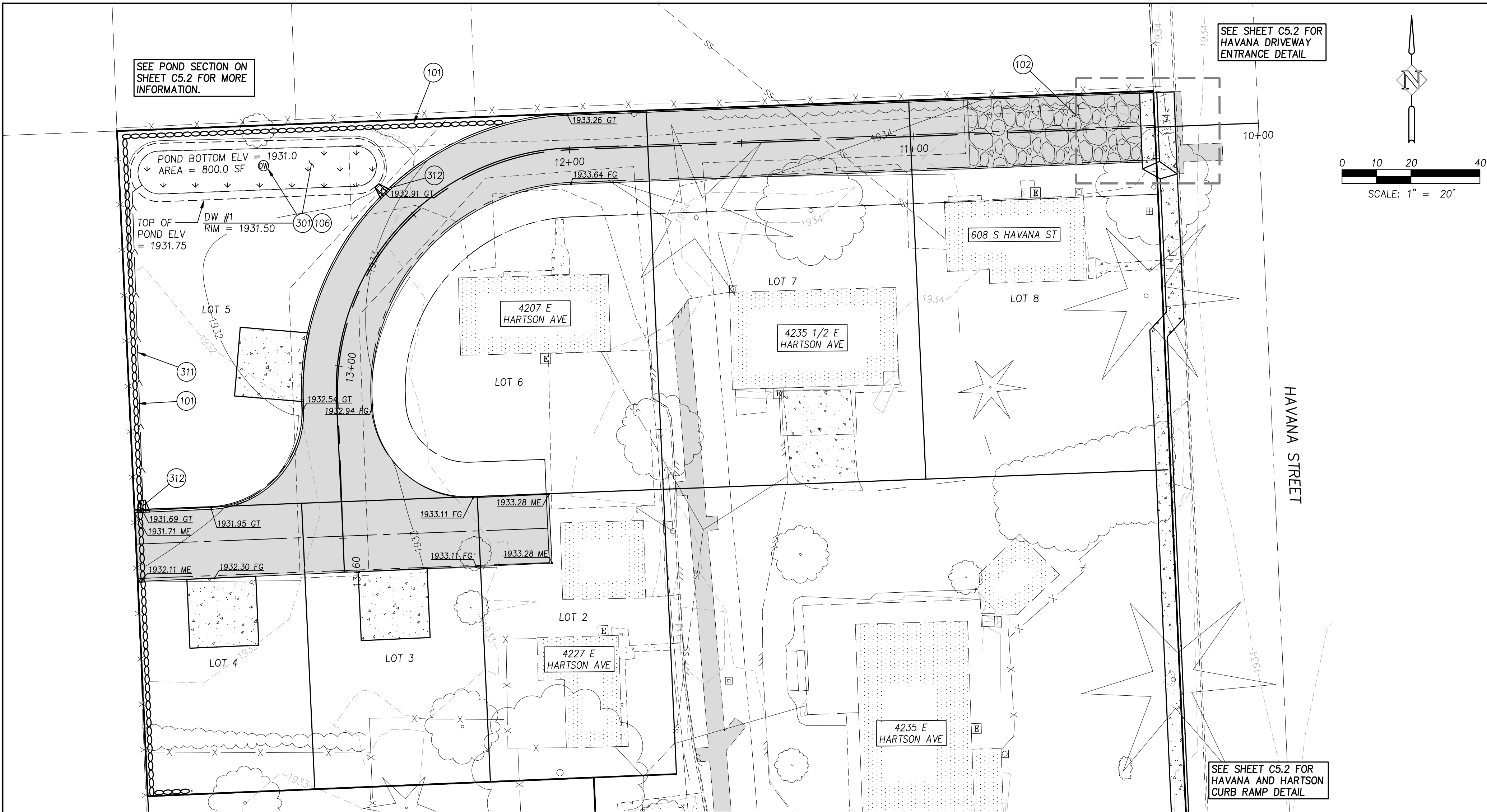
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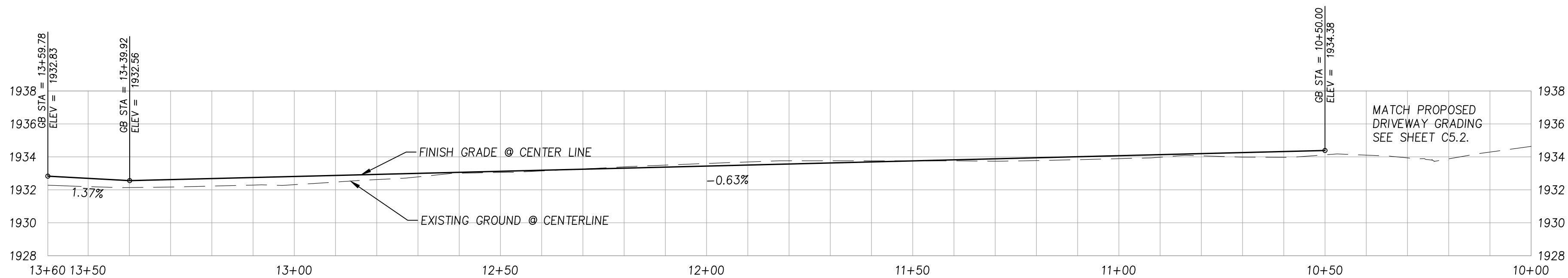
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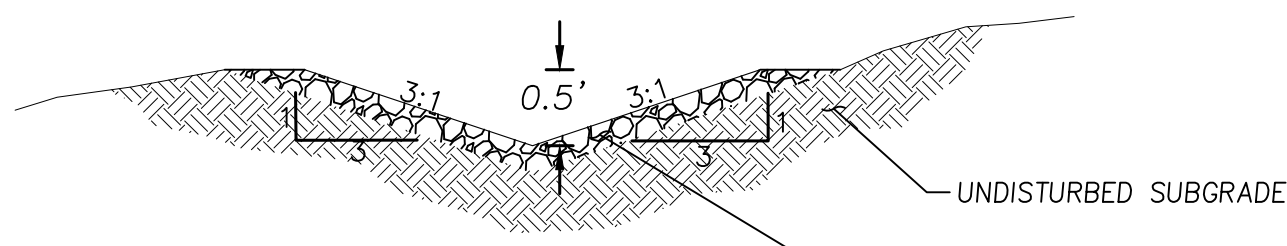


GRADING PLAN



ROAD CENTERLINE PROFILE

SCALE: 1" = 20' (HORIZ.)  
1" = 5' (VERT.)



V-DITCH DETAIL  
N.T.S.

EROSION AND SEDIMENT CONTROL STANDARD PLAN  
NOTES: PER APPENDIX 9A- SPOKANE REGIONAL  
STORMWATER MANUAL

THE FOLLOWING ESC STANDARD PLAN NOTES ORIGINATE FROM SECTION 9.4.3. THESE NOTES ARE AN OVERALL SET; USE ONLY WHAT APPLIES TO THE GIVEN PROJECT.

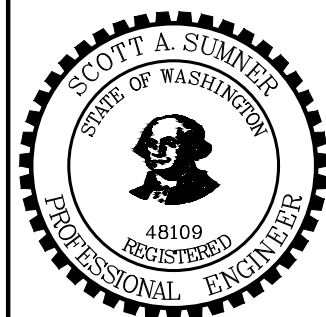
- THE FOLLOWING CONSTRUCTION SEQUENCE SHALL BE FOLLOWED IN ORDER TO BEST MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENTATION CONTROL PROBLEMS:
  - CLEAR AND GRUB SUFFICIENTLY FOR INSTALLATION OF TEMPORARY ESC BMPs;
  - INSTALL TEMPORARY ESC BMPs, CONSTRUCTING SEDIMENT TRAPPING BMPs AS ONE OF THE FIRST STEPS PRIOR TO GRADING;
  - CLEAR, GRUB AND ROUGH GRADE FOR ROADS, TEMPORARY ACCESS POINTS AND UTILITY LOCATIONS;
  - STABILIZE ROADWAY APPROACHES AND TEMPORARY ACCESS POINTS WITH THE APPROPRIATE CONSTRUCTION ENTRY BMP;
  - CLEAR, GRUB AND GRADE INDIVIDUAL LOTS OR GROUPS OF LOTS;
  - TEMPORARILY STABILIZE, THROUGH RE-VEGETATION OR OTHER APPROPRIATE BMPs, LOTS OR GROUPS OF LOTS IN SITUATIONS WHERE SUBSTANTIAL CUT OR FILL SLOPES ARE A RESULT OF THE SITE GRADING;
  - CONSTRUCT ROADS, BUILDINGS, PERMANENT STORMWATER FACILITIES (I.E. INLETS, PONDS, UIC FACILITIES, ETC.);
  - PROTECT ALL PERMANENT STORMWATER FACILITIES UTILIZING THE APPROPRIATE BMPs;
  - INSTALL PERMANENT ESC CONTROLS, WHEN APPLICABLE; AND,
  - REMOVE TEMPORARY ESC CONTROLS WHEN:
- PERMANENT ESC CONTROLS, WHEN APPLICABLE, HAVE BEEN COMPLETELY INSTALLED;
- ALL LAND-DISTURBING ACTIVITIES THAT HAVE THE POTENTIAL TO CAUSE EROSION OR SEDIMENTATION PROBLEMS HAVE CEASED; AND,
- VEGETATION HAD BEEN ESTABLISHED IN THE AREAS NOTED AS REQUIRING VEGETATION ON THE ACCEPTED ESC PLAN ON FILE WITH THE LOCAL JURISDICTION.
- INSPECT ALL ROADWAYS, AT THE END OF EACH DAY, ADJACENT TO THE CONSTRUCTION ACCESS ROUTE. IF IT IS EVIDENT THAT SEDIMENT HAS BEEN TRACKED OFF SITE AND/OR BEYOND THE ROADWAY APPROACH, CLEANING IS REQUIRED.
- IF SEDIMENT REMOVAL IS NECESSARY PRIOR TO STREET WASHING, IT SHALL BE REMOVED BY SHOVELING OR PICKUP SWEEPING AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.
- IF STREET WASHING IS REQUIRED TO CLEAN SEDIMENT TRACKED OFF SITE, ONCE SEDIMENT HAS BEEN REMOVED, STREET WASH WASTEWATER SHALL BE CONTROLLED BY PUMPING BACK ON-SITE OR OTHERWISE PREVENTED FROM DISCHARGING INTO SYSTEMS TRIBUTARY TO WATERS OF THE STATE.
- RESTORE CONSTRUCTION ACCESS ROUTE EQUAL TO OR BETTER THAN THE PRE-CONSTRUCTION CONDITION.
- RETAIN THE DUFF LAYER, NATIVE TOPSOIL, AND NATURAL VEGETATION IN AN UNDISTURBED STATE TO THE MAXIMUM EXTENT PRACTICAL.
- INSPECT SEDIMENT CONTROL BMPs WEEKLY AT A MINIMUM, DAILY DURING A STORM EVENT, AND AFTER ANY DISCHARGE FROM THE SITE (STORMWATER OR NON-STORMWATER). THE INSPECTION FREQUENCY MAY BE REDUCED TO ONCE A MONTH IF THE SITE IS STABILIZED AND INACTIVE.
- CONTROL FUGITIVE DUST FROM CONSTRUCTION ACTIVITY IN ACCORDANCE WITH THE STATE AND/OR LOCAL AIR QUALITY CONTROL AUTHORITIES WITH JURISDICTION OVER THE PROJECT AREA.
- STABILIZE EXPOSED UNWORKED SOILS (INCLUDING STOCKPILES), WHETHER AT FINAL GRADE OR NOT, WITHIN 10 DAYS DURING THE REGIONAL DRY SEASON (JULY 1 THROUGH SEPTEMBER 30) AND WITHIN 5 DAYS DURING THE REGIONAL WET SEASON (OCTOBER 1 THROUGH JUNE 30). SOILS MUST BE STABILIZED AT THE END OF A SHIFT BEFORE A HOLIDAY WEEKEND IF NEEDED BASED ON THE WEATHER FORECAST. THIS TIME LIMIT MAY ONLY BE ADJUSTED BY A LOCAL JURISDICTION WITH A "QUALIFIED LOCAL PROGRAM," IF IT CAN BE DEMONSTRATED THAT THE RECENT PRECIPITATION JUSTIFIES A DIFFERENT STANDARD AND MEETS THE REQUIREMENTS SET FORTH IN THE CONSTRUCTION STORMWATER GENERAL PERMIT.
- PROTECT INLETS, DRYWELLS, CATCH BASINS AND OTHER STORMWATER MANAGEMENT FACILITIES FROM SEDIMENT, WHETHER OR NOT FACILITIES ARE OPERABLE.
- KEEP ROADS ADJACENT TO INLETS CLEAN.
- INSPECT INLETS WEEKLY AT A MINIMUM AND DAILY DURING STORM EVENTS.
- CONSTRUCT STORMWATER CONTROL FACILITIES (DETENTION/RETENTION STORAGE POND OR SWALES) BEFORE GRADING BEGINS. THESE FACILITIES SHALL BE OPERATIONAL BEFORE THE CONSTRUCTION OF IMPERVIOUS SITE IMPROVEMENTS.
- STOCKPILE MATERIALS (SUCH AS TOPSOIL) ON SITE, KEEPING OFF OF ROADWAY AND SIDEWALKS.
- COVER, CONTAIN AND PROTECT ALL CHEMICALS, LIQUID PRODUCTS, PETROLEUM PRODUCT, AND NON- INERT WASTES PRESENT ON SITE FROM VANDALISM (SEE CHAPTER 173-304 WAC FOR THE DEFINITION OF INERT WASTE), USE SECONDARY CONTAINMENT FOR ON-SITE FUELING TANKS.
- CONDUCT MAINTENANCE AND REPAIR OF HEAVY EQUIPMENT AND VEHICLES INVOLVING OIL CHANGES, HYDRAULIC SYSTEM REPAIRS, SOLVENT AND DE-GREASING OPERATIONS, FUEL TANK DRAIN DOWN AND REMOVAL, AND OTHER ACTIVITIES THAT MAY RESULT IN DISCHARGE OR SPILLAGE OF POLLUTANTS TO THE GROUND OR INTO STORMWATER RUNOFF USING SPILL PREVENTION MEASURES, SUCH AS DRIP PANS. CLEAN ALL CONTAMINATED SURFACES IMMEDIATELY FOLLOWING ANY DISCHARGE OR SPILL INCIDENT. IF RAINING OVER EQUIPMENT OR VEHICLE, PERFORM EMERGENCY REPAIRS ON SITE USING TEMPORARY PLASTIC BENEATH THE VEHICLE.
- CONDUCT APPLICATION OF AGRICULTURAL CHEMICALS, INCLUDING FERTILIZERS AND PESTICIDES, IN SUCH A MANNER, AND AT APPLICATION RATES, THAT INHIBITS THE LOSS OF CHEMICALS INTO STORMWATER RUNOFF FACILITIES. AMEND MANUFACTURER'S RECOMMENDED APPLICATION RATES AND PROCEDURES TO MEET THIS REQUIREMENT, IF NECESSARY.
- INSPECT ON A REGULAR BASIS (AT A MINIMUM WEEKLY, AND DAILY DURING/AFTER A RUNOFF PRODUCING STORM EVENT) AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL BMPs TO ENSURE SUCCESSFUL PERFORMANCE OF THE BMPs. NOTE THAT INLET PROTECTION DEVICES SHALL BE CLEANED OR REMOVED AND REPLACE BEFORE SIX INCHES OF SEDIMENT CAN ACCUMULATE.
- REMOVE TEMPORARY ESC BMPs WITHIN 30 DAYS AFTER THE TEMPORARY BMPs ARE NO LONGER NEEDED. PERMANENTLY STABILIZE AREAS THAT ARE DISTURBED DURING THE REMOVAL PROCESS.

STORM DRAINAGE NOTES:

- TRENCH BACKFILL AND PIPE BEDDING SHALL BE IN ACCORDANCE WITH CITY OF SPOKANE STANDARD PLAN B18C-E.
- CONTRACTOR SHALL MAINTAIN A MINIMUM OF 10.0' HORIZONTAL SEPARATION BETWEEN SEWER AND WATER MAINS AND SERVICES, TYP.
- UTILITY SEPARATIONS, INCLUDING WATER AND SEWER OR STORM CROSSINGS, SHALL BE IN ACCORDANCE WITH CITY OF SPOKANE STANDARD PLANS W-110, W-111, AND W-112 (EXISTING) OR W-113 (NEW).
- STORMWATER FACILITIES, INCLUDING DRYWELLS, CATCH BASINS, PIPES AND STORM PONDS MUST BE INSPECTED AND APPROVED. PRIOR TO BACKFILL, ALL MAINS AND APPURTENANCES SHALL BE INSPECTED AND APPROVED BY THE CITY OF SPOKANE, CONSTRUCTION DEPARTMENT OF THE ENGINEERING SERVICES CONSTRUCTION MANAGEMENT OFFICE. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO NOTIFY THE CITY AT (509) 625-7722 FOR ANY REQUIRED INSPECTIONS.

GRADING PLAN  
HARTSON AND HAVANA PHASE 2  
CITY OF SPOKANE

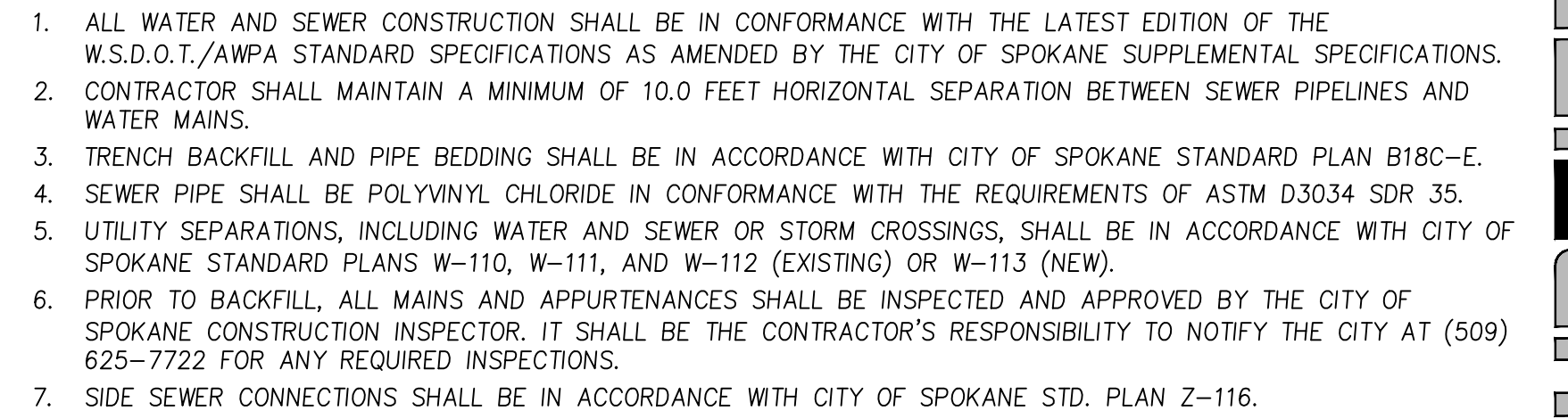
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408 SE Bessford Drive, Suite C Pullman, WA 99163  
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DESIGNED:	TKS/GAG
DRAWN:	GAG
CHECKED:	SAS
DATE:	JUNE 9, 2022

NO.	DESCRIPTION	R	E	V	I	S	I	O	N	S

SHEET NO.  
**C3.0**  
3 OF 9  
JOB NO. PMC-11

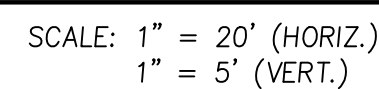


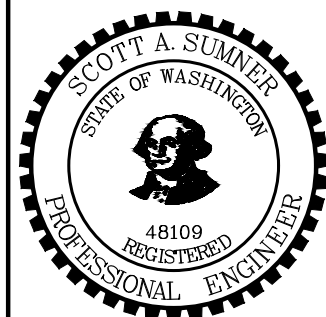
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- (400) INSTALL 4" SANITARY SEWER SERVICE (SDR 35) AND PIPE TRENCHING PER CITY OF SPOKANE STANDARD PLAN NO. A-1 AND A-2, SHEET C5.0.
- (401) INSTALL 48" SANITARY SEWER MANHOLE PER CITY OF SPOKANE STANDARD DETAIL Z-101, SHEET C5.1. SEE PROFILE FOR SIZE, LENGTH, AND SLOPE INFORMATION.
- (402) INSTALL 8" SANITARY SEWER LINE AND PIPE TRENCHING PER CITY OF SPOKANE STANDARD PLAN NO. A-1 AND A-2, SHEET C5.0. SEE PROFILE FOR SIZE, LENGTH, AND SLOPE INFORMATION.
- (404) LOCATE EXISTING SANITARY SEWER SERVICE AND CONNECT TO SERVICE BY INSTALLING 4" SANITARY SEWER CLEANOUT PER CITY OF SPOKANE STANDARD PLAN NO. Z-114, SHEET C5.1. REMOVE REMAINING PIPE.
- (405) CAP EXISTING SEWER SERVICE AND ABANDON IN PLACE.
- (513) CONNECT TO EXISTING MANHOLE.

1. ALL WATER AND SEWER CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF THE W.S.D.O.T./AWPA STANDARD SPECIFICATIONS AS AMENDED BY THE CITY OF SPOKANE SUPPLEMENTAL SPECIFICATIONS.
2. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 10.0 FEET HORIZONTAL SEPARATION BETWEEN SEWER PIPELINES AND WATER MAINS.
3. TRENCH BACKFILL AND PIPE BEDDING SHALL BE IN ACCORDANCE WITH CITY OF SPOKANE STANDARD PLAN B18C-E.
4. SEWER PIPE SHALL BE POLYVINYL CHLORIDE IN CONFORMANCE WITH THE REQUIREMENTS OF ASTM D3034 SDR 35.
5. UTILITY SEPARATIONS, INCLUDING WATER AND SEWER OR STORM CROSSINGS, SHALL BE IN ACCORDANCE WITH CITY OF SPOKANE STANDARD PLANS W-110, W-111, AND W-112 (EXISTING) OR W-113 (NEW).
6. PRIOR TO BACKFILL, ALL MAINS AND APPURTENANCES SHALL BE INSPECTED AND APPROVED BY THE CITY OF SPOKANE CONSTRUCTION INSPECTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY AT (509) 625-7722 FOR ANY REQUIRED INSPECTIONS.
7. SIDE SEWER CONNECTIONS SHALL BE IN ACCORDANCE WITH CITY OF SPOKANE STD. PLAN Z-116.

UPSTREAM MANHOLE	DOWNSTREAM MANHOLE	BEARING
SSMH #4	SSMH #6	S 4° 49' 27" E
SSMH #6	SSMH #7 (EX)	S 87° 12' 15" W



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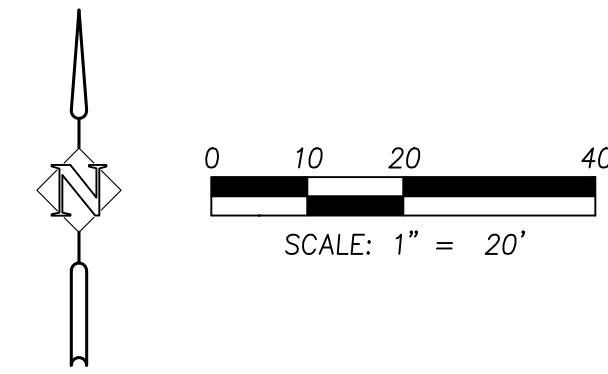
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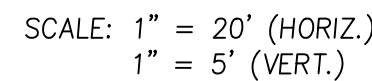
JOB NO.

PMC-11



- (500) INSTALL 8" DUCTILE IRON WATER LINE. SEE PROFILE FOR LENGTH. TRENCHING PER CITY OF SPOKANE STANDARD PLANS NO. A-1 AND A-2, SHEET C5.0.
- (503) INSTALL 45° BEND WITH MECHANICAL JOINT RESTRAINTS. SEE PIPE RESTRAINT TABLE ON THIS SHEET FOR REQUIREMENTS.
- (504) INSTALL 1" WATER SERVICE AND METER PER CITY OF SPOKANE STANDARD PLAN NO. Y-111. TRENCHING PER CITY OF SPOKANE STANDARD PLAN NO. A-1 AND A-2, SHEET C5.0.
- (505) CONNECT NEW 8" WATER LINE TO EXISTING 8" WATER LINE WITH A 8"x8"x8" LIVE TAPPING SLEEVE. COORDINATE CONNECTION WITH THE CITY OF SPOKANE. CONTRACTOR TO VERIFY EXISTING LOCATION, DEPTH, AND MATERIAL OF EXISTING 8" WATER PRIOR TO CONSTRUCTION. IF A CONFLICT EXISTS, NOTIFY PROJECT MANAGER.
- (510) CONNECT THE EXISTING WATER SERVICE TO NEW 8" WATER MAIN. SEE WATER NOTE 4.
- (511) REMOVE EXISTING WATER SERVICE WITHIN PROJECT CONSTRUCTION LIMITS AND CAP WATER LINE. WATER DEPARTMENT WILL "KILL" THE WATER SERVICE AT THE MAIN LINE CONNECTION IN HAVANA STREET. COORDINATE WORK WITH THE CITY OF SPOKANE WATER DEPARTMENT AT 509-625-7800. SEE WATER NOTE 4.
- (512) INSTALL 8" END CAP WITH MECHANICAL RESTRAINT PER GSP SPEC DIV. 7-09.
- (514) INSTALL MANHOLE BLOW OFF PER CITY OF SPOKANE STANDARD PLAN NO. Y-104, SEE SHEET C5.1.
- (515) INSTALL WATER ISOLATION AND METER VAULT PER CITY OF SPOKANE STANDARD PLAN Y-115, SEE SHEET C5.2. MATERIALS TO BE SUPPLIED BY THE CONTRACTOR. WORK WILL BE DONE BY CITY FORCES. WATERLINE THROUGH THE VAULT WILL BE 8". VAULT SHALL BE 6'X10'X6.5'. VAULT SHALL BE LOCATED A MAXIMUM 3' FROM THE PROPERTY LINE.

1. PROVIDE A MINIMUM OF 5.5' OF DEPTH FROM FINISHED GRADE TO PIPE INVERT.
2. ALL WATER MAIN FITTINGS TO BE MECHANICAL JOINT PER CITY SPECIFICATIONS WITH RESTRAINTS PER CITY SPECIFICATIONS.
3. NO UTILITIES ARE TO BE INSTALLED WITHIN 5' PARALLEL OF SERVICE LINES. 10' MINIMUM SEPARATION BETWEEN SANITARY SEWER AND WATER LINES IS REQUIRED.
4. CITY FORCES WILL INSTALL ALL DOMESTIC SERVICE LINES AND TAPS AS WELL AS CONNECTIONS TO EXISTING MAINS. CONTRACTOR RESPONSIBLE FOR EXCAVATION AND BACKFILL.
5. ALL CURB STOPS ARE TO BE INSTALLED IN UTILITY EASEMENT, 1-FOOT FROM BACK EDGE OF EASEMENT.
6. ALL VALVES, FITTINGS, PIPES, ETC. SHALL BE DUCTILE IRON, FOR 4" AND LARGER DIAMETER.
7. TRENCH BACKFILL AND PIPE BEDDING SHALL BE IN ACCORDANCE WITH CITY OF SPOKANE STANDARD PLANS B18C-E.
8. DEFLECTIONS AT PIPE JOINTS SHALL NOT EXCEED 75% OF MAXIMUM ALLOWED DEFLECTION, PER MANUFACTURER'S RECOMMENDATIONS.
9. GATE VALVES ARE REQUIRED ON ALL HYDRANT LEADS (SYMBOL NOT SHOWN ON PLANS), LOCATED A MINIMUM OF 2' FROM THE EDGE OF GUTTER.
10. ALL FIRE HYDRANTS SHALL BE SET 2' FROM THE BACK OF THE UTILITY EASEMENT. FIRE HYDRANTS SHALL BE EQUIPPED WITH STORZ FITTINGS PER CITY OF SPOKANE STANDARDS. (SUPPLEMENTAL SPECIFICATION 9-30.5(2).)
11. UTILITY SEPARATIONS, INCLUDING WATER AND SEWER OR STORM CROSSINGS, SHALL BE IN ACCORDANCE WITH CITY OF SPOKANE STANDARD PLANS A-4 THRU A-7.
12. THE CONTRACTOR MUST NOTIFY THE GOVERNING FIRE DISTRICT WHEN THE FIRE HYDRANTS HAVE BEEN INSTALLED AND REQUEST FIRE HYDRANT FLOW TESTING.
13. WATER SERVICES SHALL MEET CURRENT BACKFLOW STANDARDS PER WAC 246-290-490 AND FOLLOW CITY OF SPOKANE WATER DEPARTMENT RULES AND REGULATIONS FOR WATER SERVICE INSTALLATIONS.  
<https://static.spokaneclity.org/documents/business/resources/engineeringpolicies/water-service-rules-and-regulations-2016-06-10.pdf>
14. ON-PROPERTY SITE WATER LINES NEED TO BE INSPECTED BY CITY WATER PRIOR TO BACKFILL. INSPECTION CAN BE SCHEDULED AFTER WATER PERMIT FEES ARE PAID.
15. CITY OF SPOKANE NOW REQUIRES A MANDATORY CITY RPBA AND FLOW METER ASSEMBLY FOR ALL FIRE HYDRANT WATER USAGE (E.G. IF NEEDED FOR CONSTRUCTION DUST CONTROL, ETC.). THIS HYDRANT PROGRAM REQUIRES AN ANNUAL PERMIT FEE, CONSUMPTION BILLING FOR ACTUAL USE, AND DEPOSIT FOR THE RPBA AND METER ASSEMBLY TO BE LEASED FROM THE CITY. PLEASE CALL 311 OR CITY WATER DEPT. AT 509-625-7800 FOR MORE INFO. VIOLATIONS FOR NOT USING CITY LEASED RPBA/METER ASSEMBLY ON HYDRANT WATER USAGE WILL RESULT IN MONETARY PENALTIES STARTING 2021.
16. THE TAPS FOR BOTH SERVICES AND THE METER FOR THE EXISTING HOUSE WILL NEED TO BE PURCHASED AFTER THE PLANS ARE ACCEPTED FOR CONSTRUCTION AND PRIOR TO INSTALLING THE MAIN EXTENSION. WATER WILL INSTALL THE SERVICE FROM THE MAIN TO THE PROPERTY LINE OR METER BOX IN THE DITCH DUG BY YOUR EXCAVATOR. THE OWNER/DEVELOPER IS RESPONSIBLE FOR THE REMAINDER OF THE SERVICE LINE, BACKFILLING AND ALL SURFACE IMPROVEMENTS.
17. THE SECOND METER FOR 1222 E MARIETTA AVENUE MAY BE PURCHASED ONCE THE BUILDING PERMIT FOR THE NEW HOME IS APPROVED.



MAXIMUM PERMISSIBLE DEFLECTION IN LAYING PUSH-ON JOINT PIPE

FITTING TYPE/SIZE	PIPE SIZE			
	12" & 10"	8"	6"	4"
	LENGTH (FEET) OF RESTRAINED PIPE REQUIRED IN EACH DIRECTION:			
90° BENDS, TEES, CROSSES, VALVES AND DEAD-ENDS	150'	107'	74'	53'
11-1/4" BENDS	10'	8'	6'	4'
22-1/2" BENDS	20'	14'	10'	8'
45° BENDS	40'	28'	20'	14'

NOTE: FOR STATIC SYSTEM PRESSURES GREATER THAN 85 PSI, ADJUST AS FOLLOWS:

- ADD 1 FOOT OF RESTRAINED LENGTH FOR EACH PSI OVER 85 PSI FOR ALL PIPE DIAMETERS IN THE TABLE.
- FOR LOCATIONS THAT ARE SERVED BY A PRESSURE REDUCING VALVE (PRV) RESTRAINED LENGTHS SHALL REFLECT PRV FAILURE.

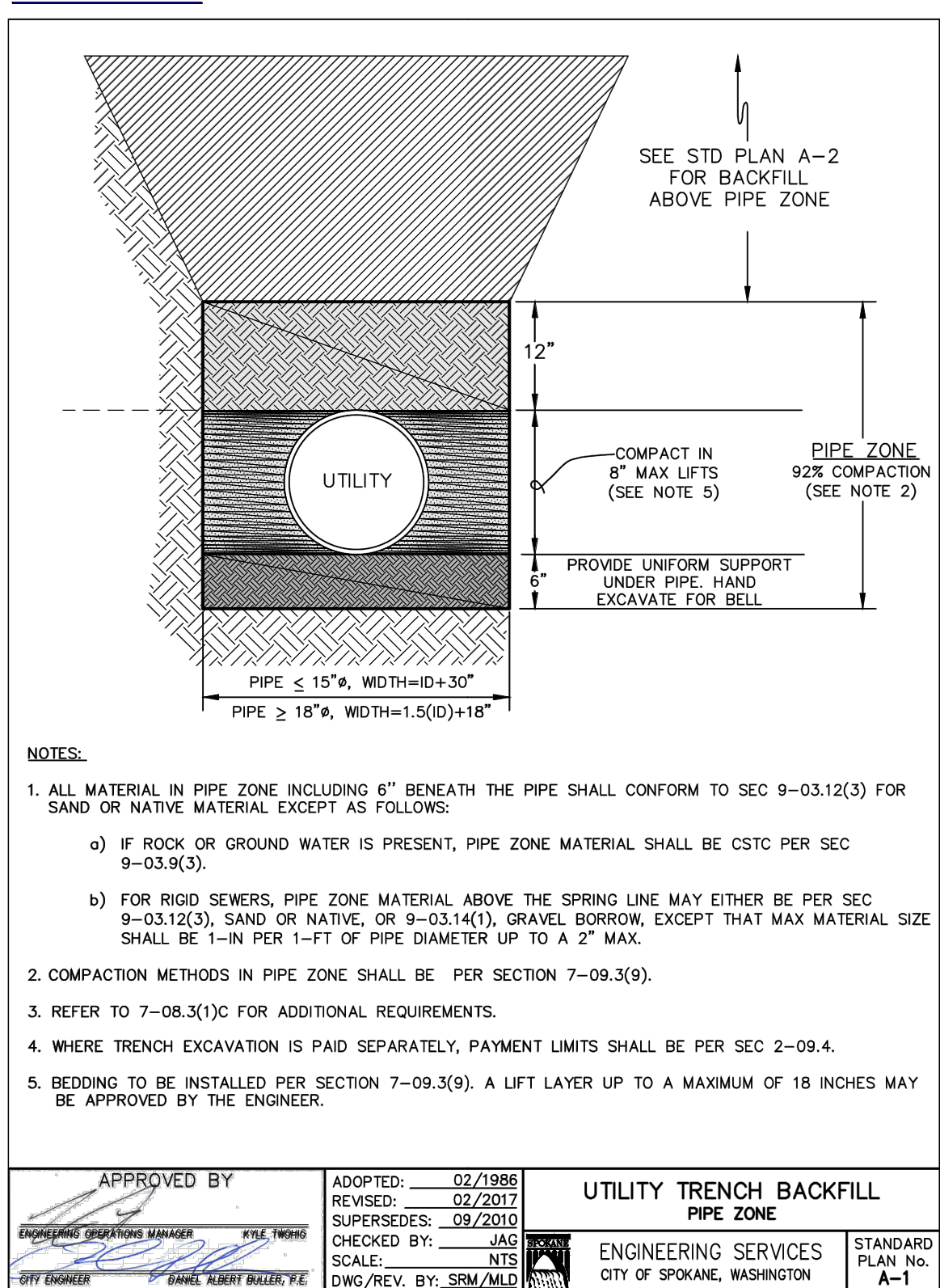
RESTRAINED LENGTHS SHOWN ARE REQUIRED EACH SIDE OF FITTING  
 FOR PIPE DIAMETERS GREATER THAN 12", RESTRAINT SHALL BE CALCULATED.  
 FOR STATIC PRESSURE GREATER THAN 120 PSI, RESTRAINT SHALL BE CALCULATED.

SIGNATURE \_\_\_\_\_

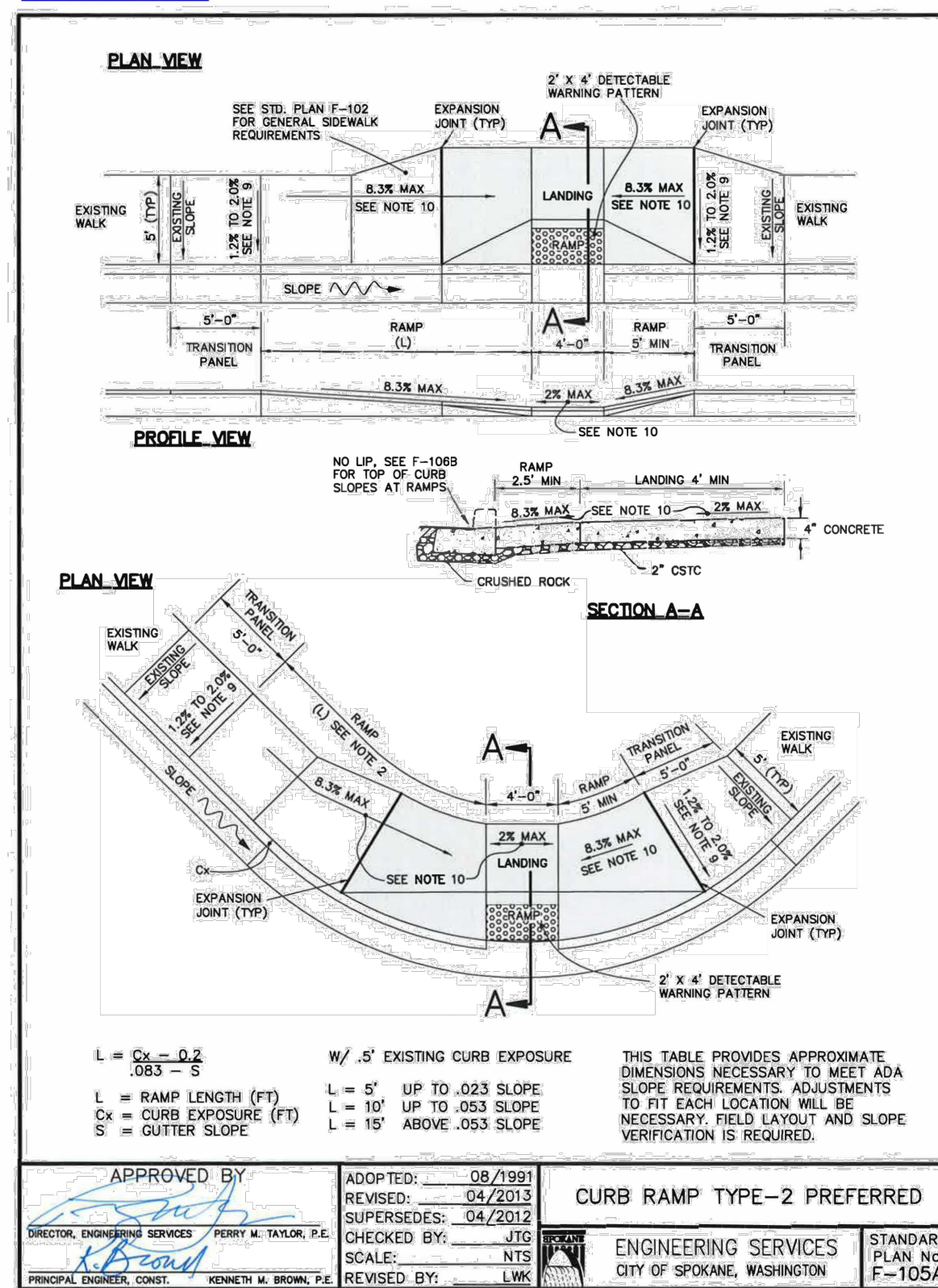
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DATE \_\_\_\_\_

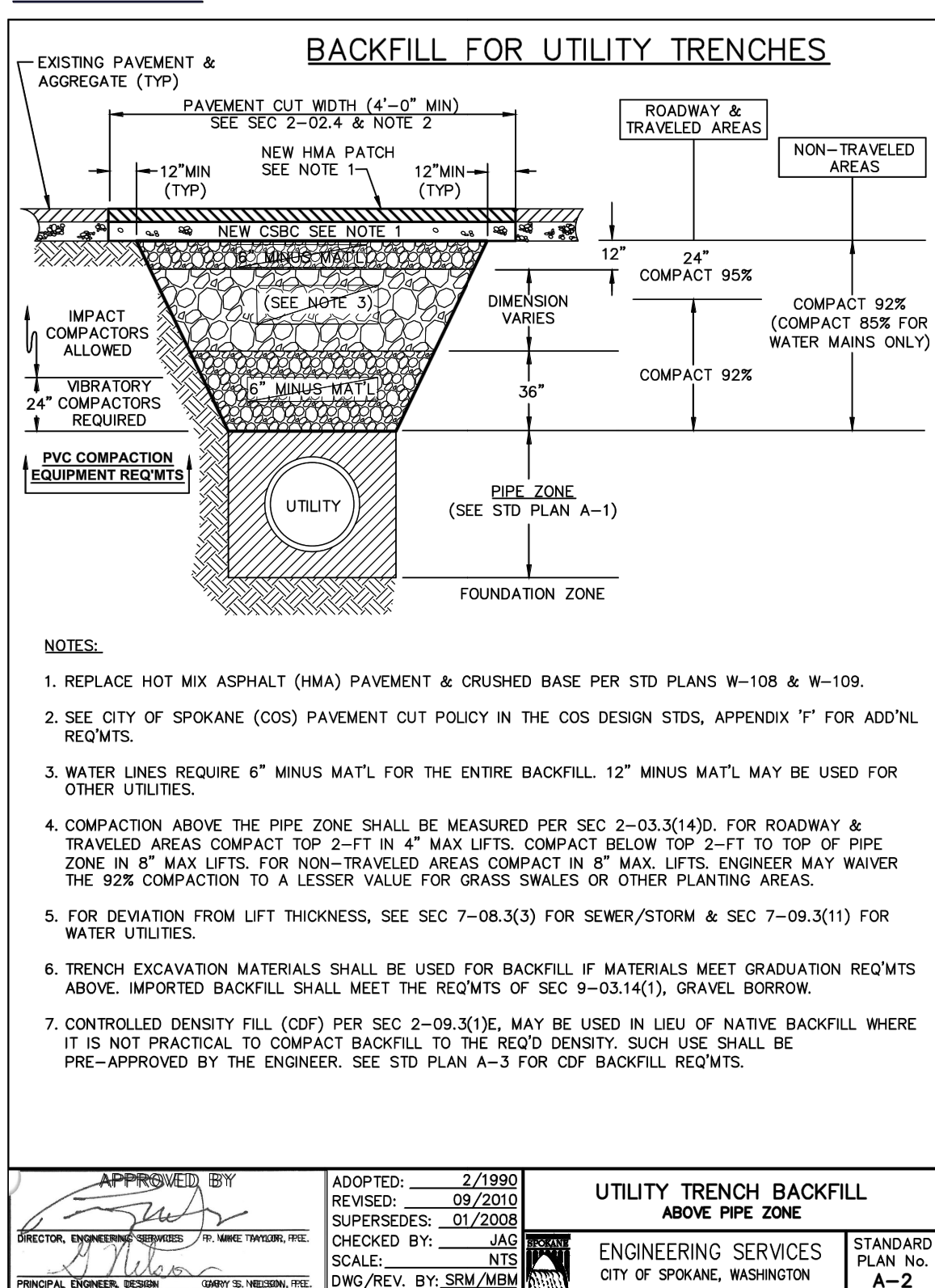
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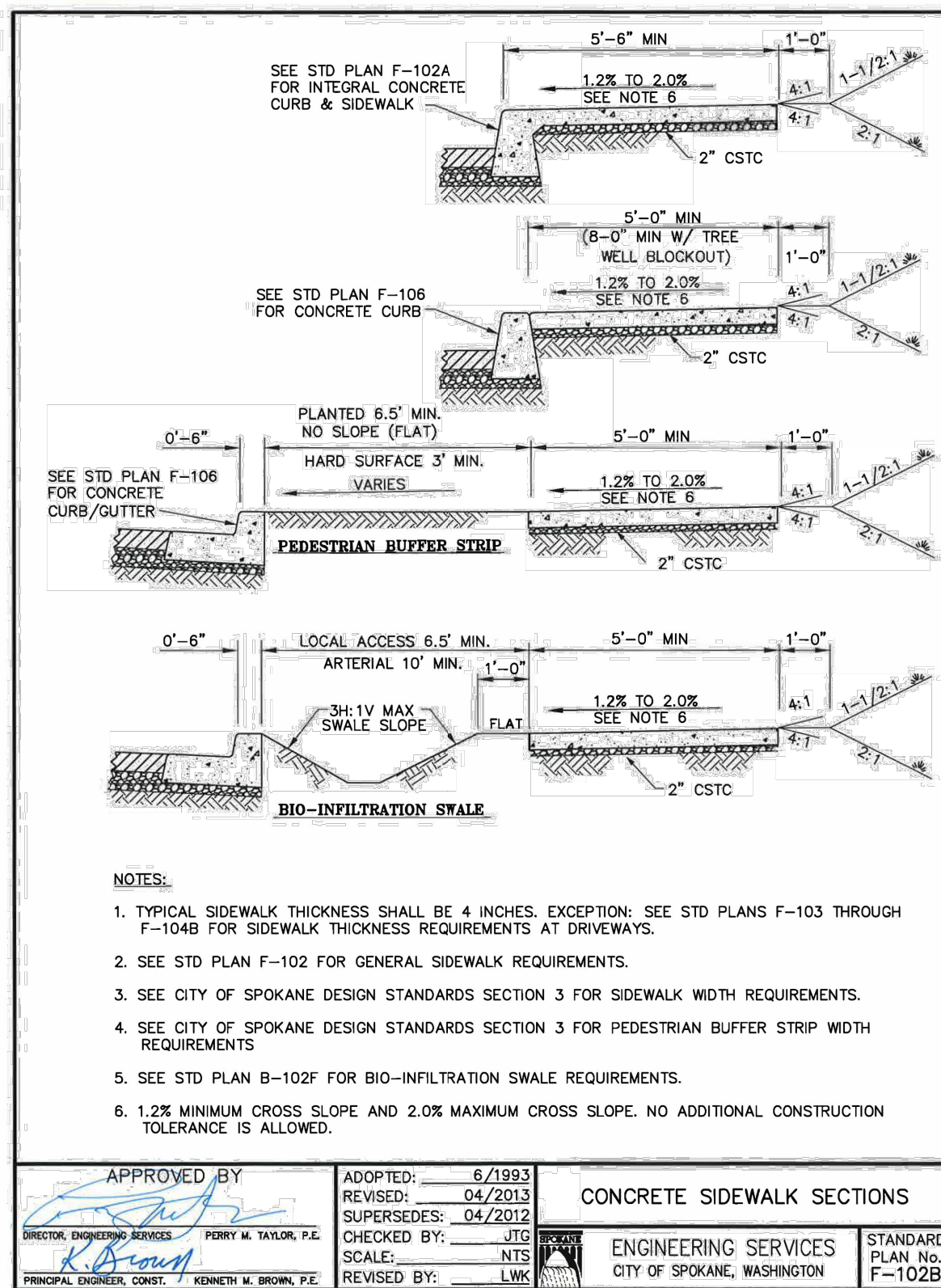
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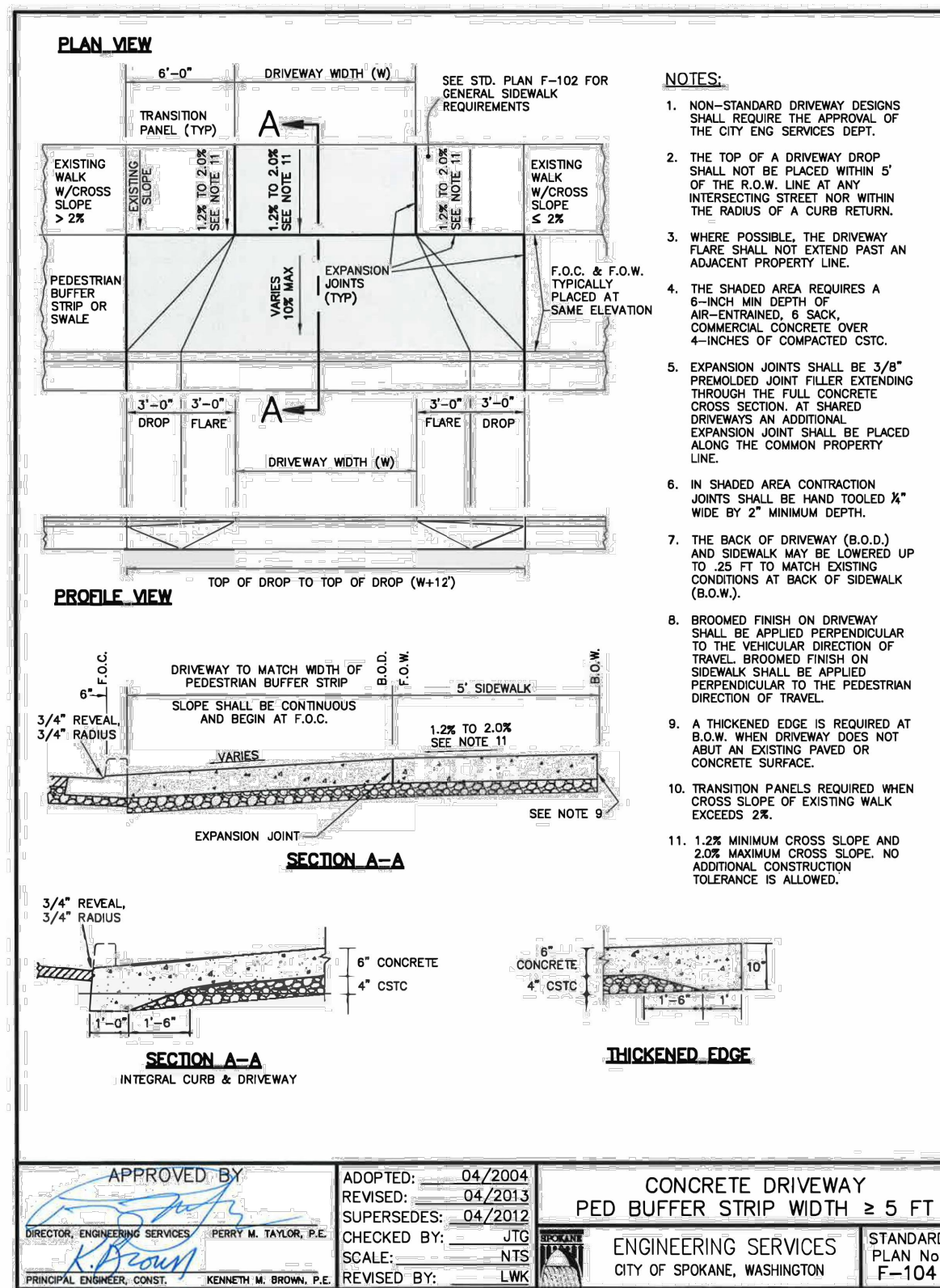
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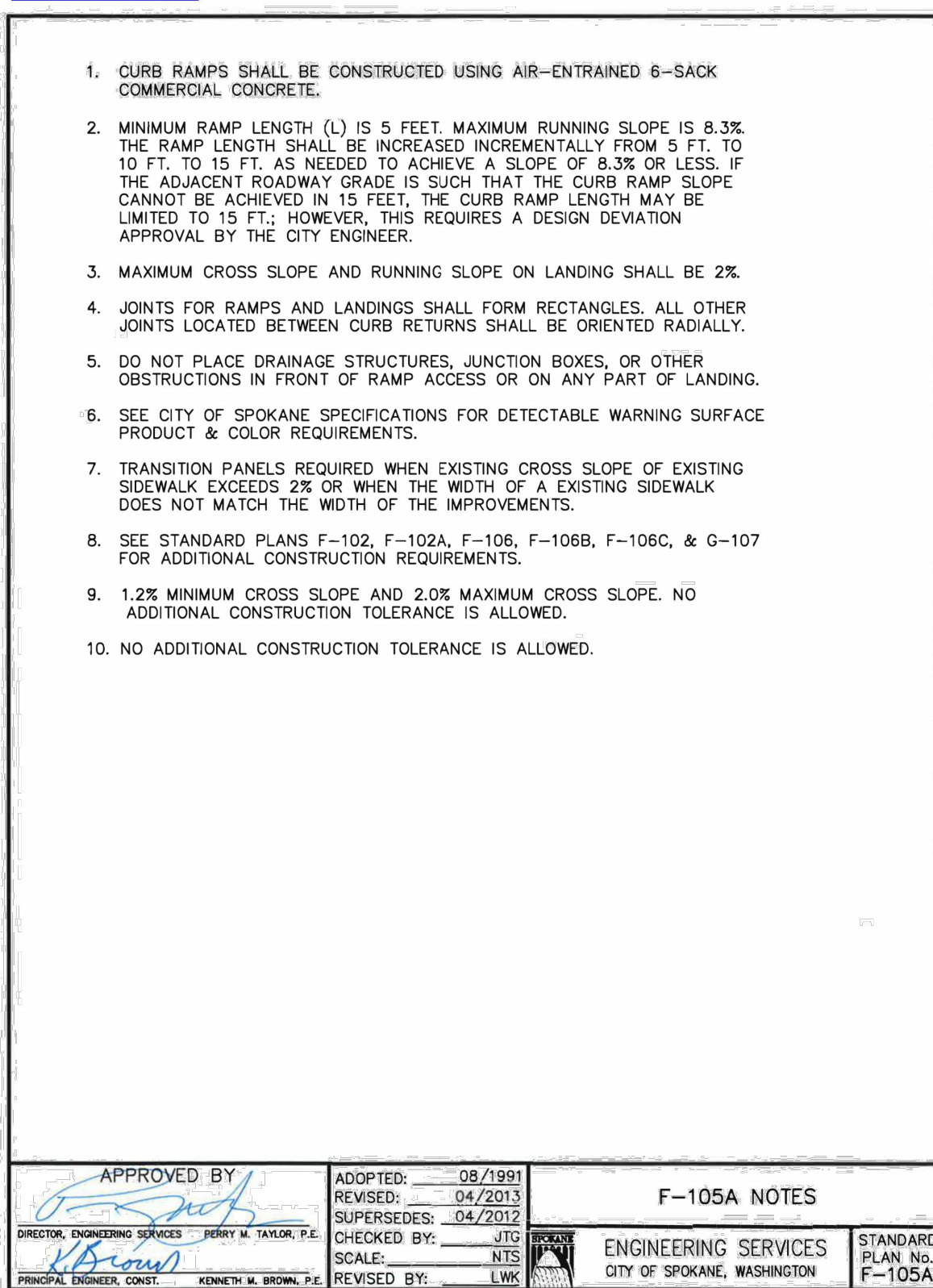
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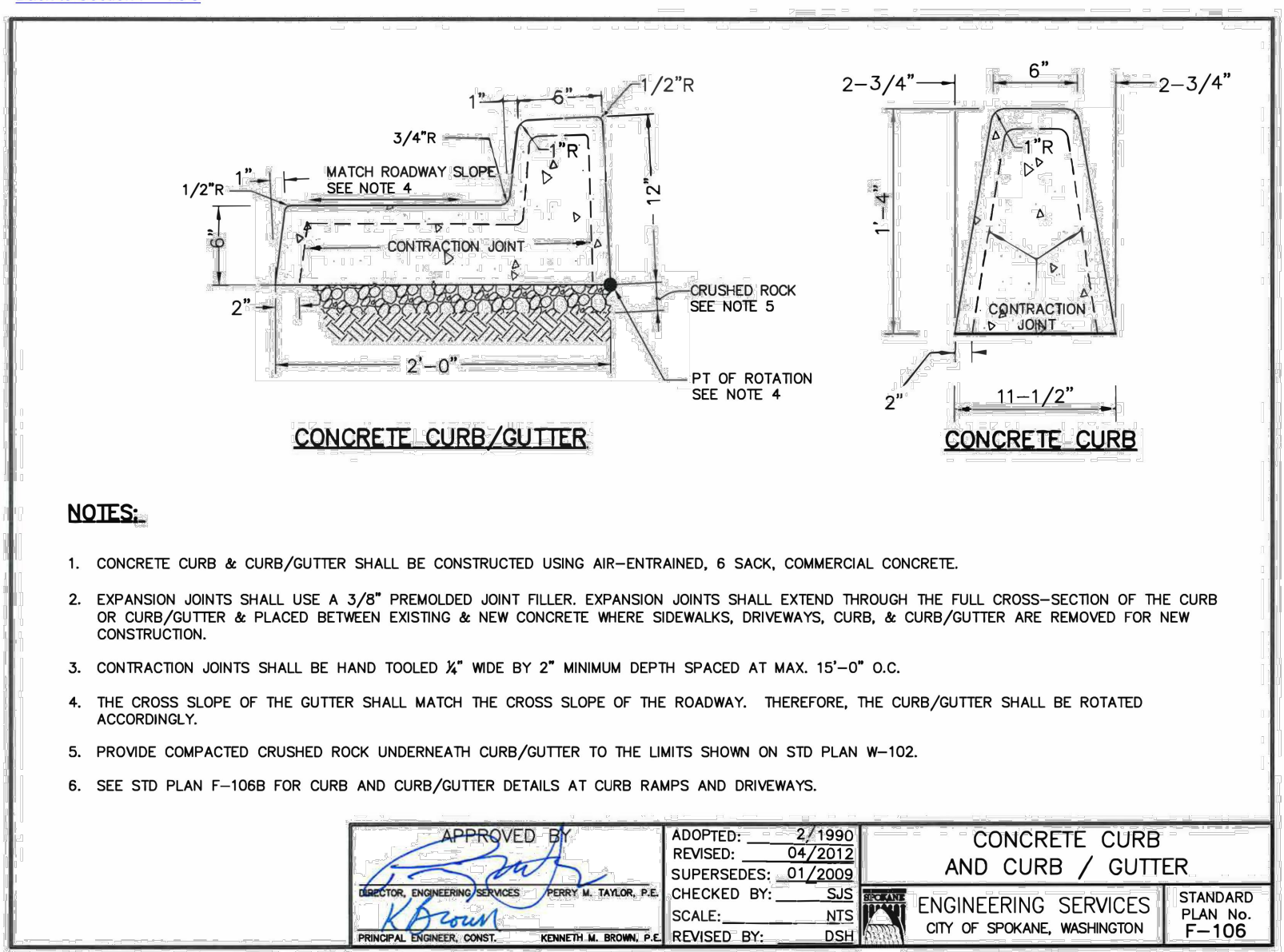
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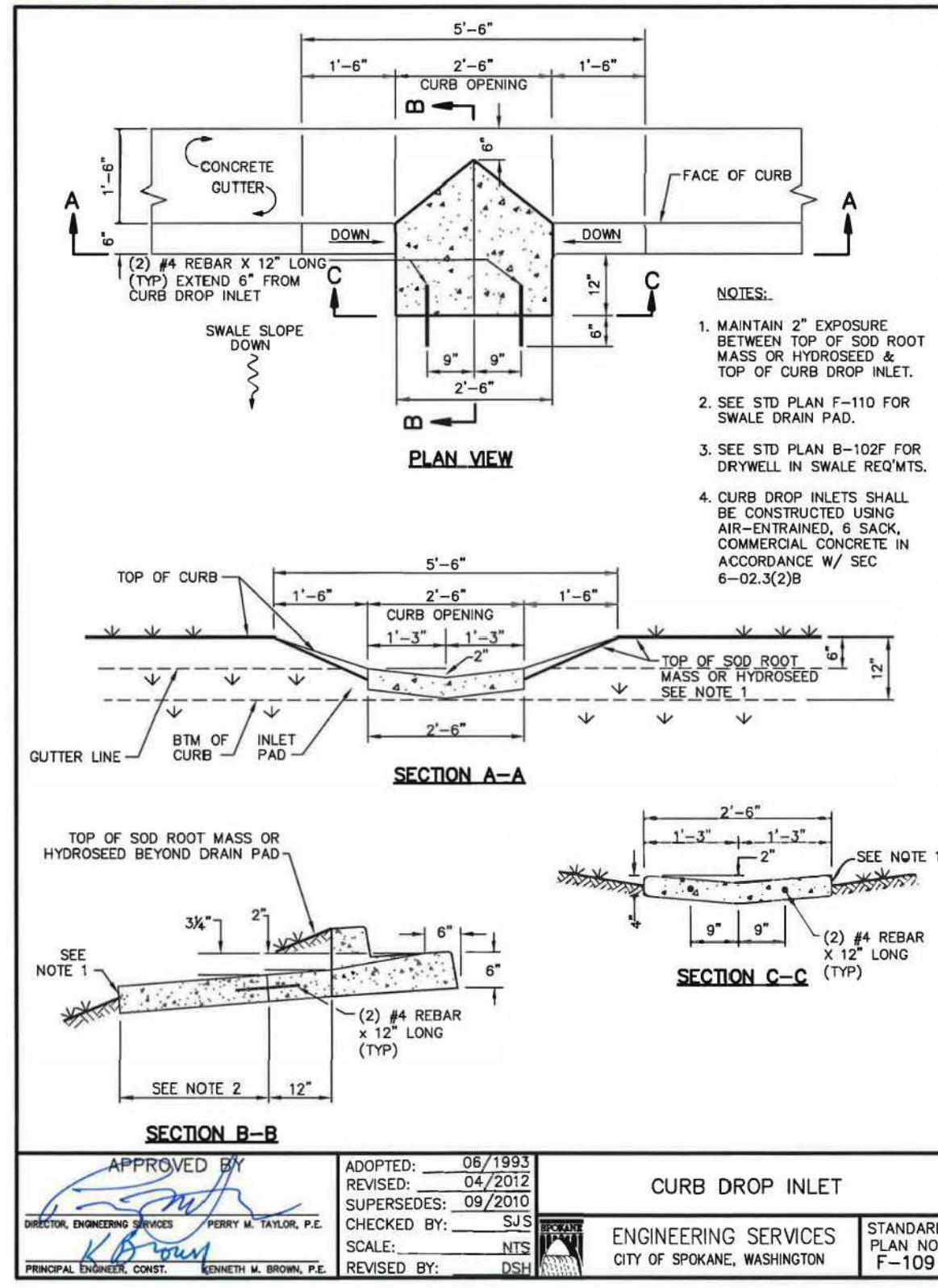
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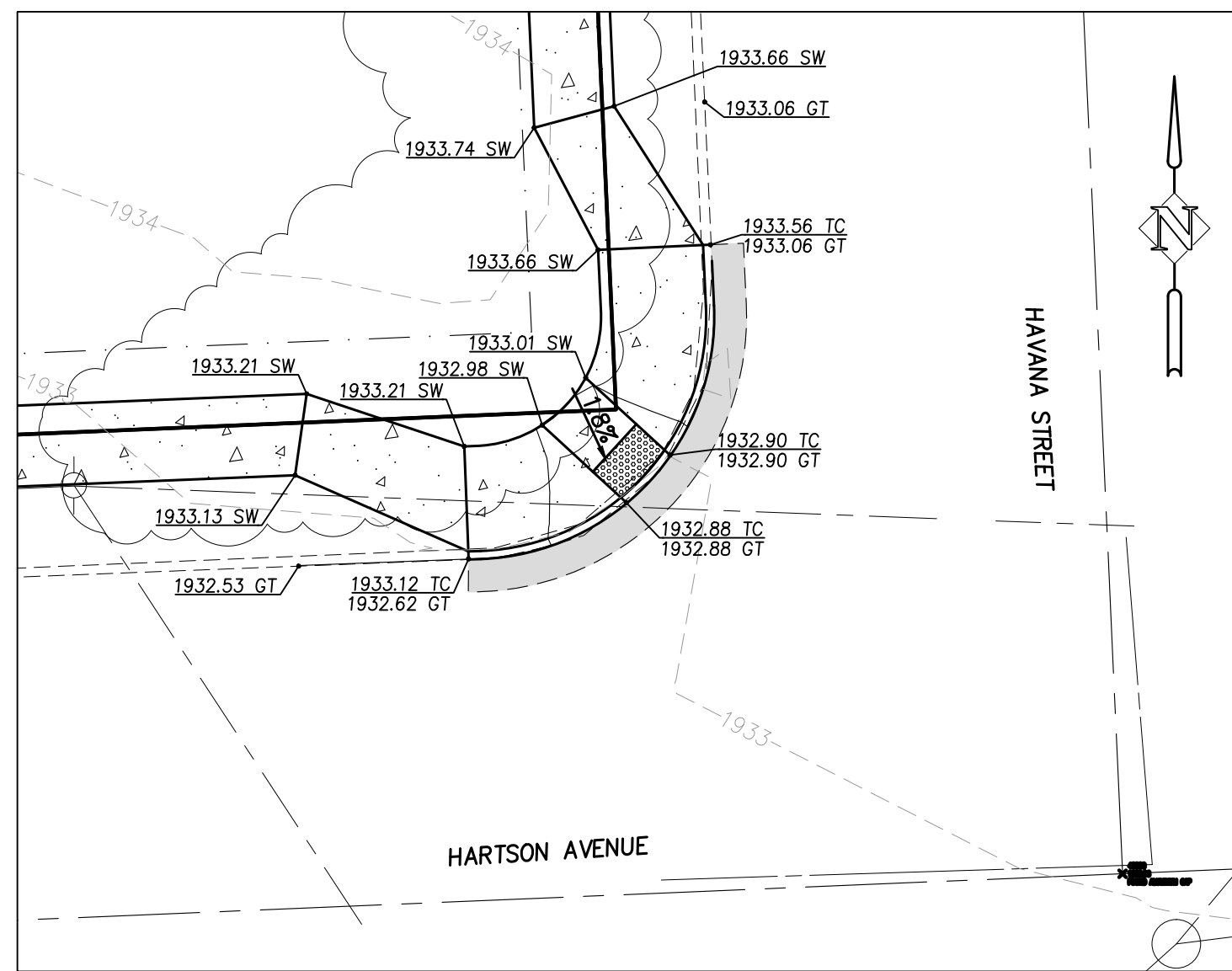
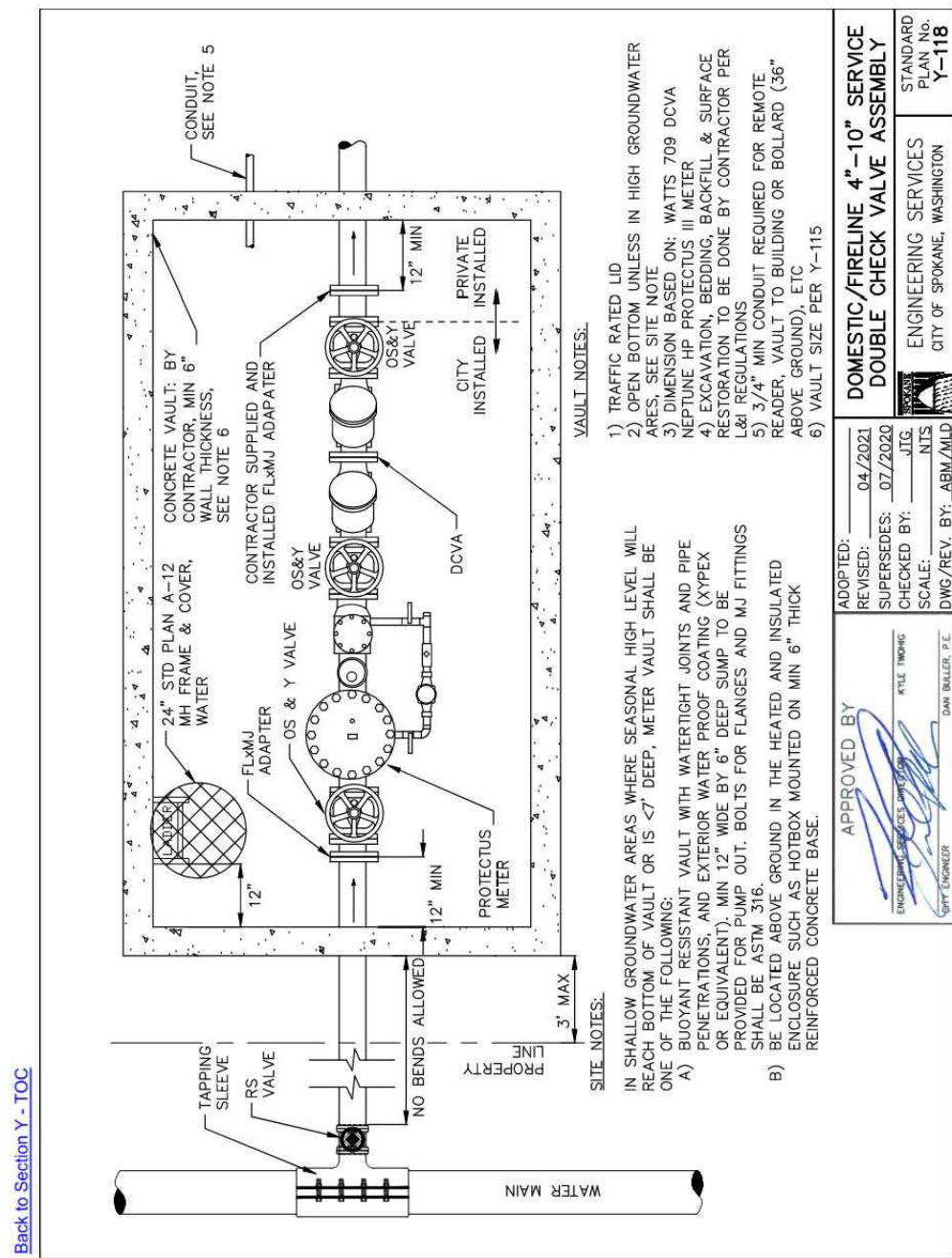


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MINIMUM WATER SERVICE VAULT DIMENSIONS		W X L X H (INSIDE)
3" DOMESTIC	6" X 8' X 6'6"	6' X 10' X 5'6"
3" DOMESTIC W/DCVA	6" X 10' X 6'6"	6' X 10' X 5'6"
3" IRRIGATION W/DCVA	6" X 10' X 6'6"	6' X 10' X 5'6"
4" DOMESTIC	6" X 8' X 6'6"	6' X 10' X 5'6"
4" DOMESTIC W/DCVA	6" X 10' X 6'6"	6' X 10' X 5'6"
4" FIRE ONLY	6" X 7' X 6'6"	6' X 10' X 5'6"
4" FIRE & DOMESTIC	6" X 12' X 6'6"	6' X 10' X 5'6"
4" IRRIGATION W/DCVA	6" X 10' X 6'6"	6' X 10' X 5'6"
6" DOMESTIC	6" X 8' X 6'6"	6' X 10' X 5'6"
6" DOMESTIC W/DCVA	6" X 12' X 6'6"	6' X 10' X 5'6"
6" FIRE ONLY	6" X 7' X 6'6"	6' X 10' X 5'6"
6" FIRE & DOMESTIC	6" X 14' X 6'6"	6' X 10' X 5'6"
6" IRRIGATION W/DCVA	6" X 12' X 6'6"	6' X 10' X 5'6"
8" FIRE ONLY	6" X 10' X 6'6"	6' X 10' X 5'6"
8" FIRE & DOMESTIC	6" X 16' X 6'6"	6' X 10' X 5'6"
10" FIRE ONLY	6" X 10' X 6'6"	6' X 10' X 5'6"
10" FIRE & DOMESTIC	6" X 16' X 6'6"	6' X 10' X 5'6"

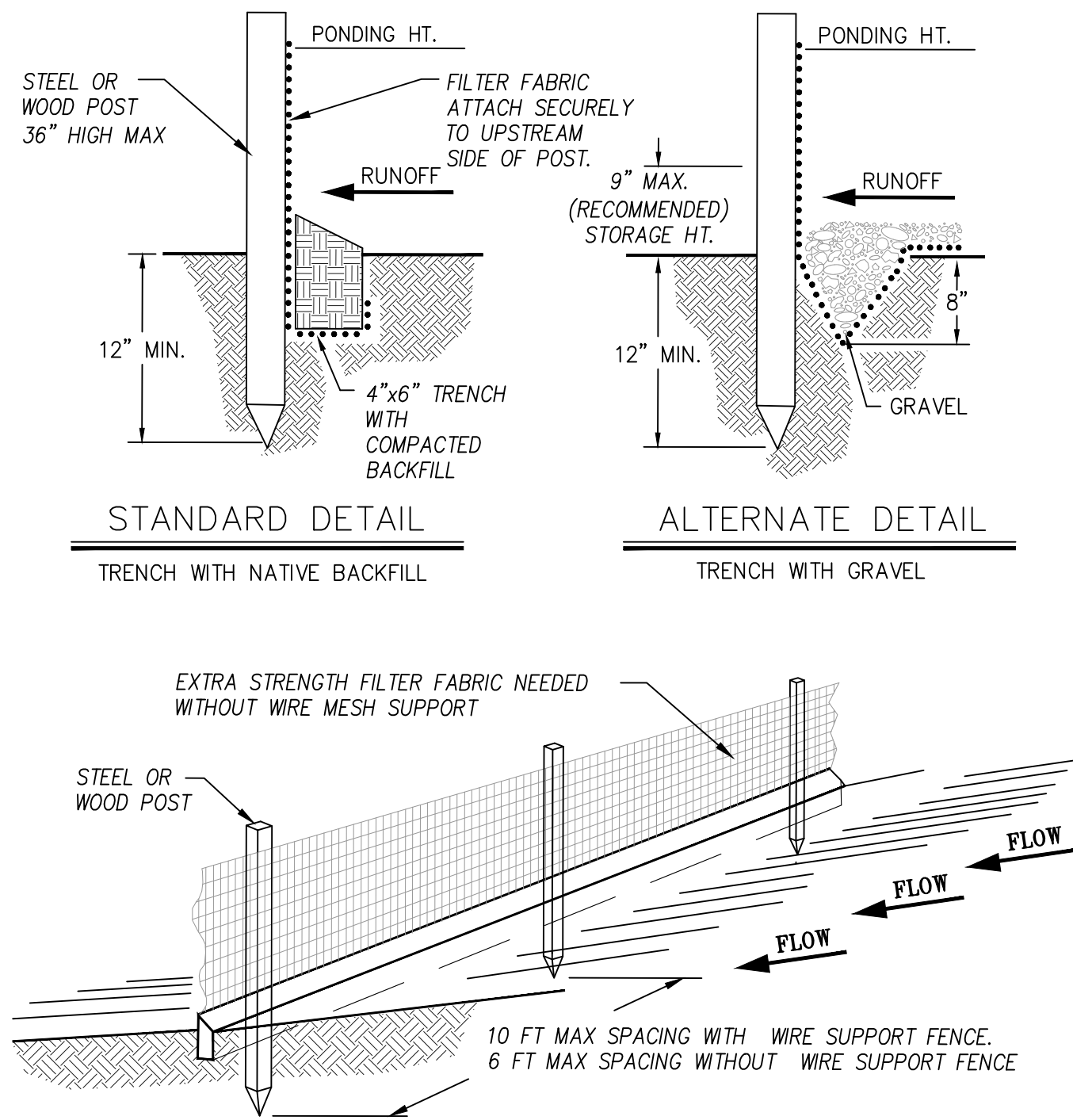
1. IF THERE ARE 2 SERVICES, (EG TWO LINES 4" AND LARGER OR THREE LINES 2" AND LARGER RUNNING PARALLEL IN VAULT) ALL VAULTS SHALL BE A MINIMUM OF 8' WIDE.
2. IF THERE ARE MORE THAN 2 SERVICES, VAULT DIMENSIONS MUST BE OBTAINED FROM THE TAPPING DEPARTMENT (509) 625-7847
3. ALL VAULTS WILL BE HEAVY DUTY TRAFFIC RATED
4. THESE VAULTS ARE MINIMUM INSIDE DIMENSIONS

APPROVED BY  ENGINEERING SERVICES DIVISION CITY ENGINEER		ADOPTED: _____ REVISED: <u>07/2020</u> SUPERSEDES: <u>02/2017</u> SCALE: <u>NTS</u> DWG./REV BY: <u>MB/MLD</u>	WATER SERVICE VAULT MINIMUM DIMENSIONS  ENGINEERING SERVICES CITY OF SPOKANE, WASHINGTON	STANDARD PLAN NO. <b>Y-115</b>
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HARTSON AND HAVANA CURB RAMP DETAIL

SCALE: 1" = 10'



**NOTES:**

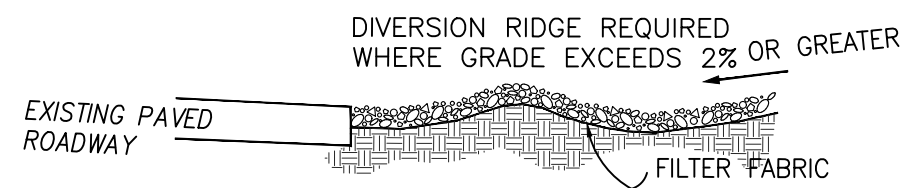
1. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
2. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF- SITE AND CAN BE PERMANENTLY STABILIZED.
3. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

SILT FENCE

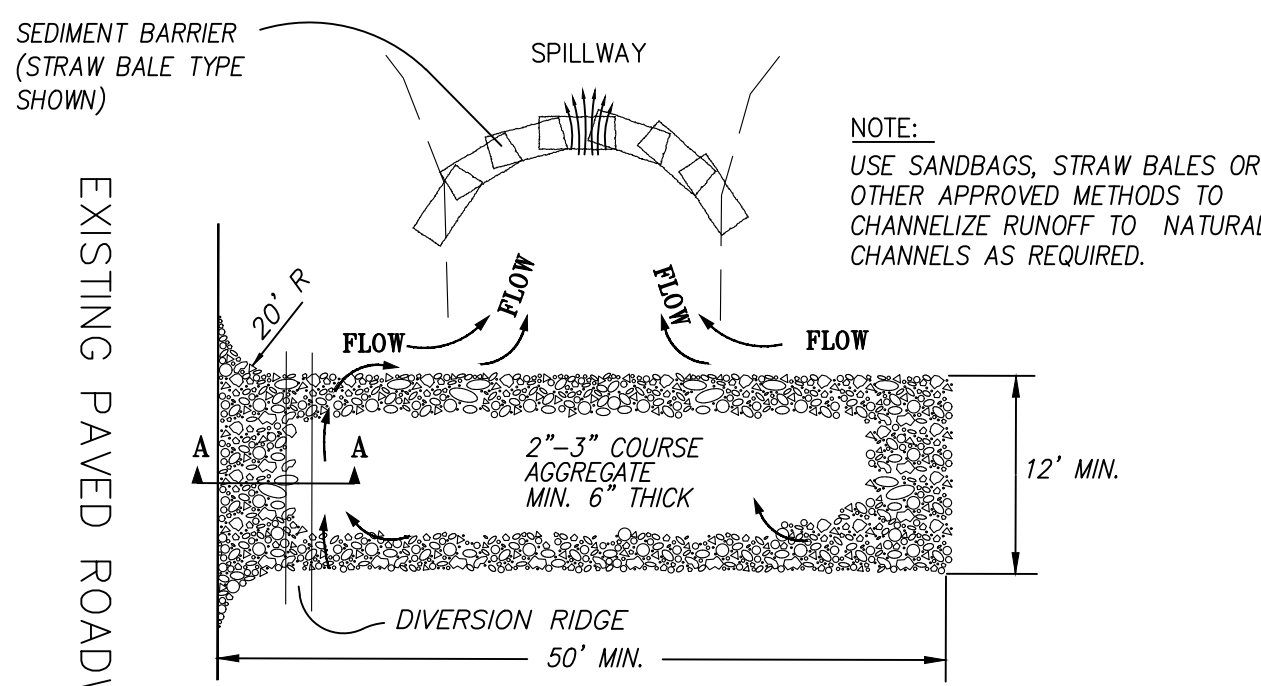
N.T.S

**NOTES:**

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO EXIST. ASPHALT ROADWAYS.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

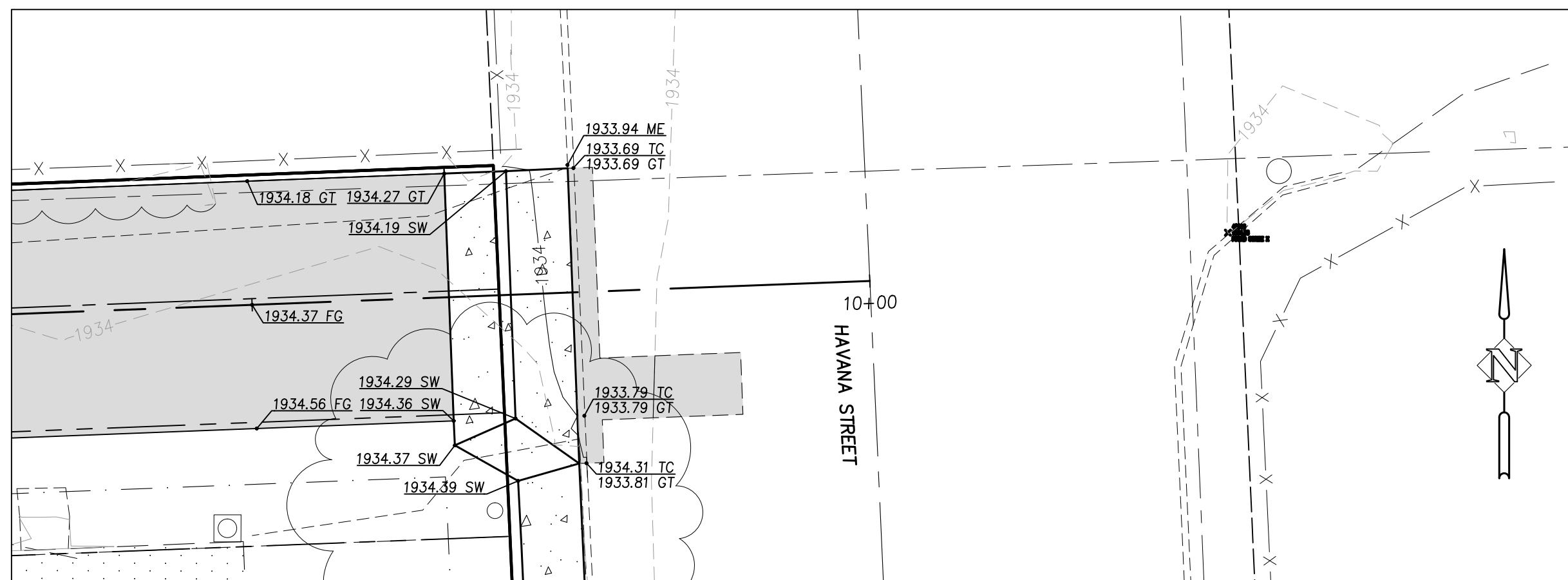


## SECTION A-A



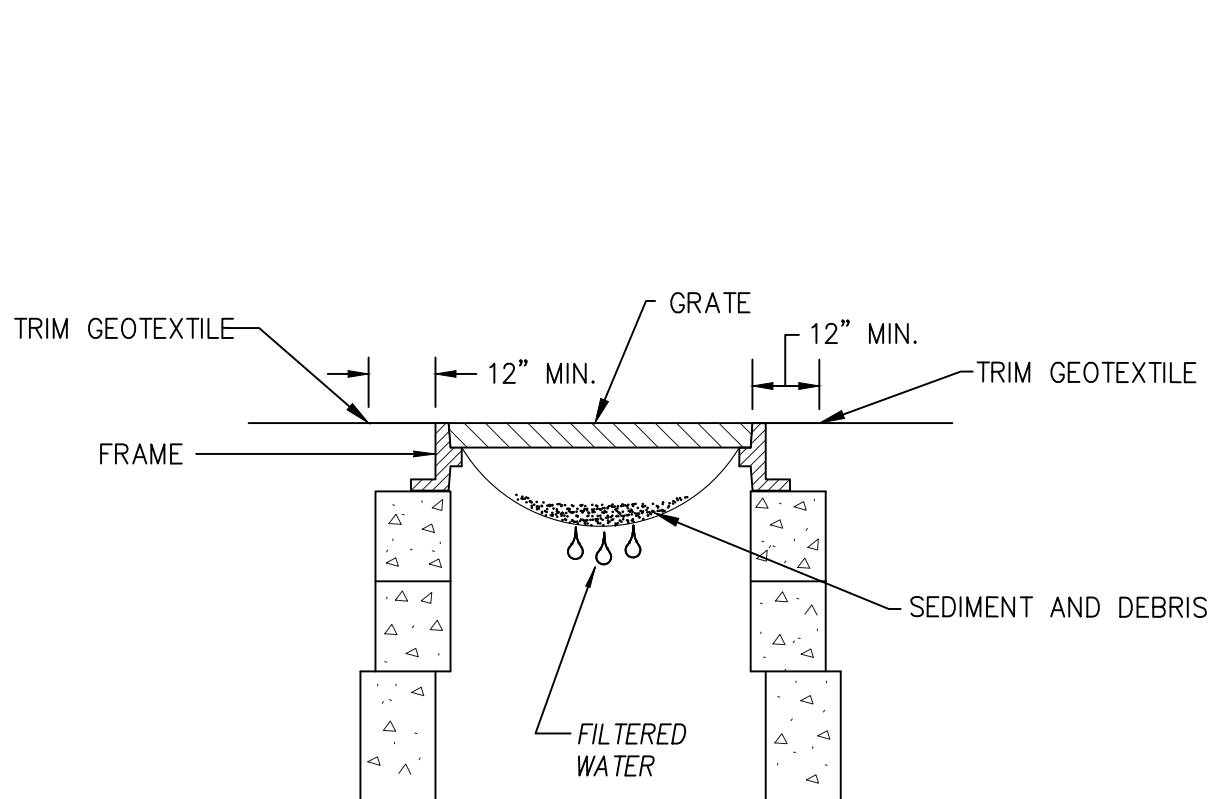
TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT

N.T.S



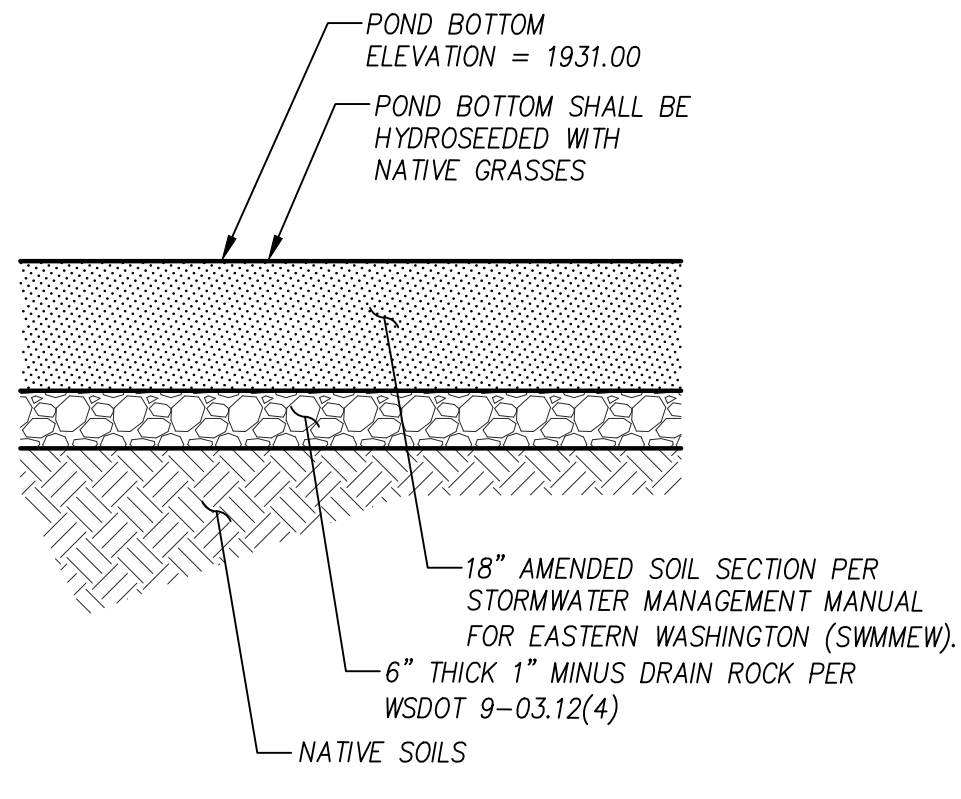
HAVANA DRIVEWAY ENTRANCE DETAIL

SCALE: 1" = 10'



## INLET PROTECTION

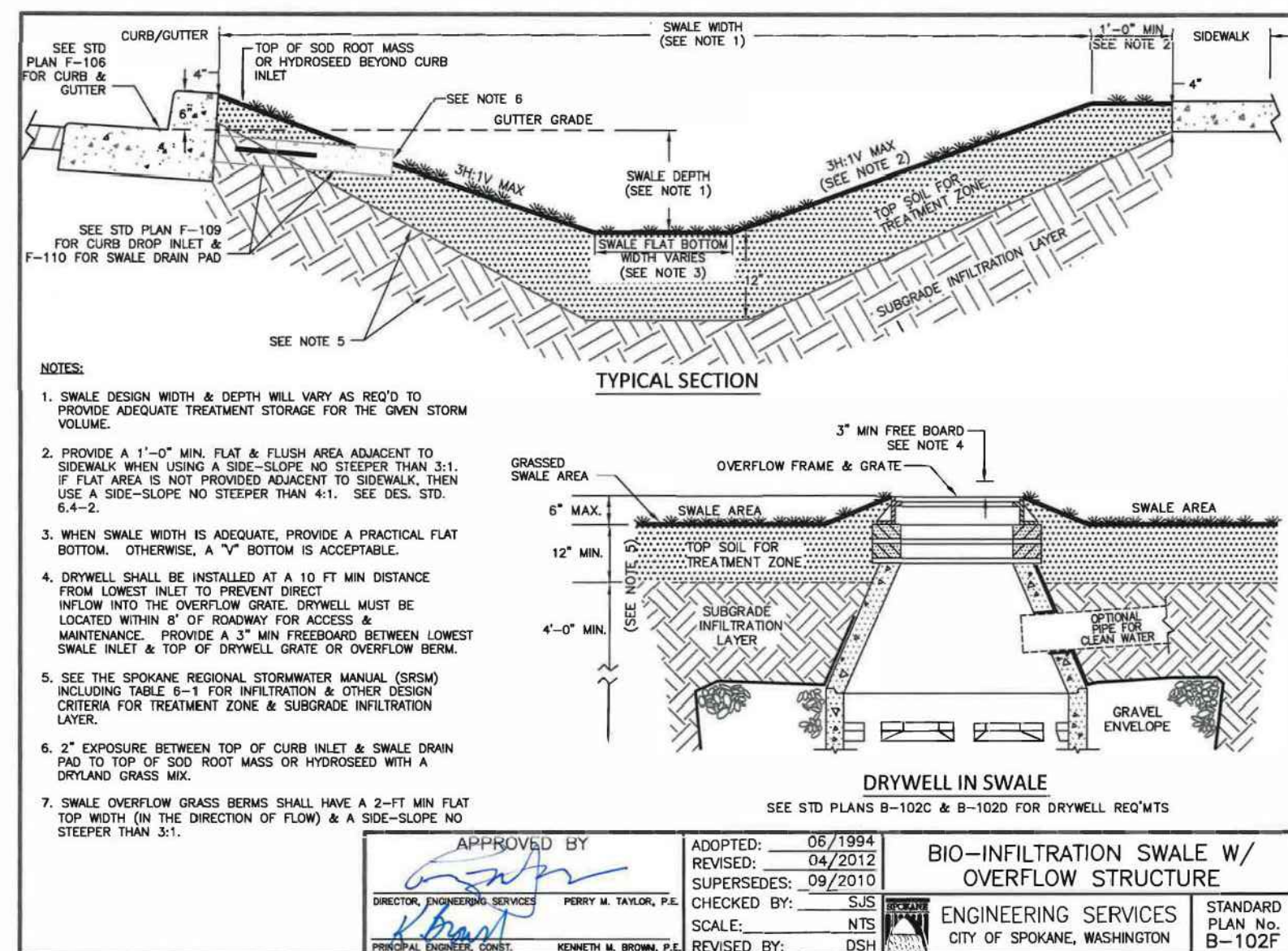
N.T.S





POND SECTION

N.T.S

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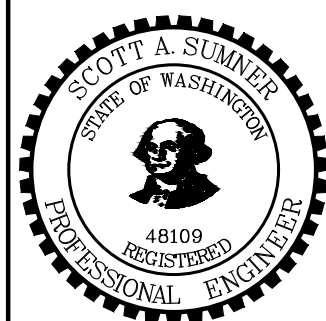
APPROVED BY 		ADOPTED: 06/1994 REVISED: 04/2012 SUPERSEDES: 09/2010	BIO-INFILTRATION SWALE W/ OVERFLOW STRUCTURE	
DIRECTOR, ENGINEERING SERVICES	PERRY M. TAYLOR, P.E.	CHECKED BY: SJS		ENGINEERING SERVICES CITY OF SPOKANE, WASHINGTON
PRINCIPAL, DESIGN CONSULTANT	KENNETH M. BROMBERG, P.E.	SCALE: NTS REVISED BY: DSH		

## DETAILS

## HARTSON AND HAVANA PHASE 2

CITY OF SPOKANE

**Syntier**  
Engineering, Inc.  
405 SE Brelsford Drive, Suite C Pullman, WA 99163  
[www.SyntierEng.com](http://www.SyntierEng.com) 509.339.6187

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SHEET NO.

# C5.2

9 OF 9

JOB NO.

PMC-11