

ROAD AND DRAINAGE IMPROVEMENTS HAZELWOOD PARK

IN THE SOUTHEAST 1/4, SECTION 31, TOWNSHIP 26 NORTH, RANGE 44 EAST, W.M.
SPOKANE COUNTY, WASHINGTON



VICINITY MAP
NTS



SHEET INDEX

SHEET 1	COVER AND INDEX SHEET
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SHEET 7	DETENTION POND AND DETAIL SHEET
SHEET 8	DETAIL SHEET

LEGEND

EXISTING FEATURES

[Symbol]	ASPHALT SURFACING
[Symbol]	CURB
[Symbol]	SIDEWALK
[Symbol]	FOUND POINT AS NOTED
[Symbol]	DRYWELL
[Symbol]	GUY WIRE POLE
[Symbol]	POWER POLE
[Symbol]	TELEPHONE ENCLOSURE
[Symbol]	WATER VALVE
[Symbol]	FIRE HYDRANT
[Symbol]	SANITARY SEWER MANHOLE
[Symbol]	WATER LINE
[Symbol]	SANITARY SEWER LINE
[Symbol]	STORM DRAIN LINE / CULVERT
[Symbol]	POWER LINE (OHP OR UGP)
[Symbol]	TELEPHONE LINE (OHT OR UGT)
[Symbol]	GAS LINE
[Symbol]	CONTOURS
[Symbol]	FENCE
[Symbol]	FIBER OPTIC LINE
[Symbol]	LOT LINE

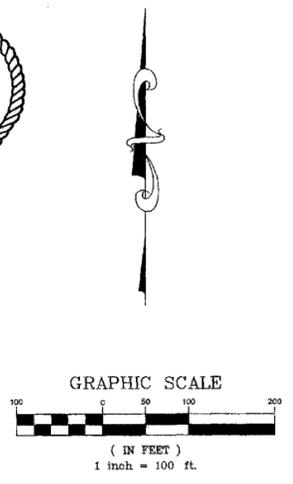
CERTIFICATION

THE DESIGN IMPROVEMENTS SHOWN IN THIS SET OF PLANS AND CALCULATIONS CONFORM TO THE APPLICABLE EDITIONS OF THE SPOKANE COUNTY STANDARDS FOR ROAD AND SEWER CONSTRUCTION AND THE SPOKANE COUNTY GUIDELINES FOR STORM WATER MANAGEMENT. I APPROVE THESE PLANS FOR CONSTRUCTION.

CHAD HEMBIGNER, P.E. _____ DATE _____
DEVELOPER _____ DATE _____

PROPOSED IMPROVEMENTS

[Symbol]	ASPHALT SURFACING
[Symbol]	CURB
[Symbol]	SIDEWALK
[Symbol]	GRAVEL
[Symbol]	DRYWELL
[Symbol]	STORM MANHOLE
[Symbol]	CONCRETE INLET
[Symbol]	POWER POLE
[Symbol]	WATER VALVE
[Symbol]	FIRE HYDRANT
[Symbol]	WATER SHUTOFF / WATER VAULT
[Symbol]	SANITARY SEWER MANHOLE
[Symbol]	CLEANOUT (CO)
[Symbol]	WATER LINE (AS SIZED)
[Symbol]	SLEEVE FOR WATER / SEWER CROSSING
[Symbol]	SANITARY SEWER LINE (AS SIZED)
[Symbol]	STORM DRAIN LINE / CULVERT
[Symbol]	UTILITY TRENCHING
[Symbol]	GAS LINE TRENCHING
[Symbol]	CONTOURS
[Symbol]	FENCE
[Symbol]	STORM WATER SWALE / POND
[Symbol]	DIRECTION OF SURFACE STORM WATER DRAINAGE
[Symbol]	TOP OF CURB ELEVATION
[Symbol]	FLOWLINE ELEVATION
[Symbol]	CURB INLET
[Symbol]	INLET ELEVATION AT FLOWLINE
[Symbol]	FINISHED GRADE ELEVATION



I have reviewed the construction of this project and to my knowledge find it to be in substantial conformance with the accepted plans and Spokane County Standards except as noted.

Surveying was provided by Storhaug Engineering.



RECORD DRAWINGS

STORHAUG ENGINEERING
1000 N. WASHINGTON ST., SPOKANE, WA 99201
PH: 509-325-1100 FAX: 509-325-1101

COVER AND INDEX SHEET
ROAD AND DRAINAGE IMPROVEMENTS
HAZELWOOD PARK
SPOKANE COUNTY, WASHINGTON

DATE 10/20/05
DRAWN KSN/JSC
CHECKED CM
SCALE AS SHOWN
PROJECT NUMBER 05028
DRAWING NO. 1 OF 8

COVER

05028--DWG Cover--ST

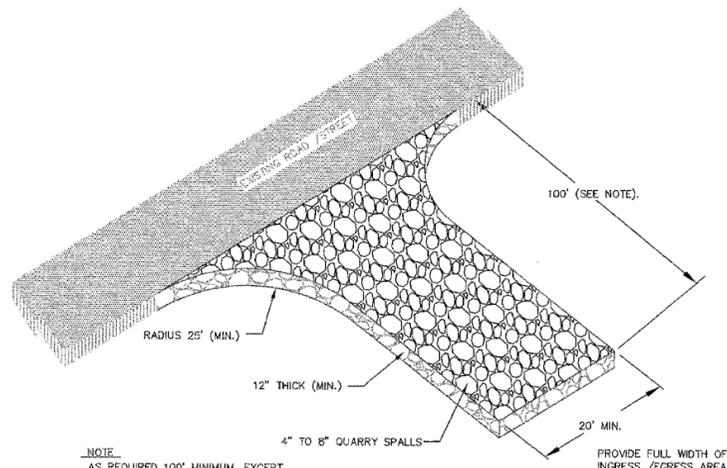
P-1907 *Chris Bulte*

DEFINITION: A TEMPORARY STONE-STABILIZED PAD LOCATED AT POINTS OF VEHICULAR INGRESS AND EGRESS ON A CONSTRUCTION SITE.

PURPOSE: TO REDUCE THE AMOUNT OF MUD, DIRT, ROCK, ETC. TRANSPORTED ONTO PUBLIC ROADS BY MOTOR VEHICLES OR RUNOFF BY CONSTRUCTING A STABILIZED PAD OF ROCK SPALLS AT ENTRANCES TO CONSTRUCTION SITES AND WASHING OF TIRES DURING EGRESS.

CONDITIONS WHERE PRACTICE APPLIES: WHENEVER TRAFFIC WILL BE LEAVING A CONSTRUCTION SITE AND MOVING DIRECTLY ONTO A PUBLIC ROAD OR OTHER PAVED AREAS.

MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 2-INCH STONES, AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED.



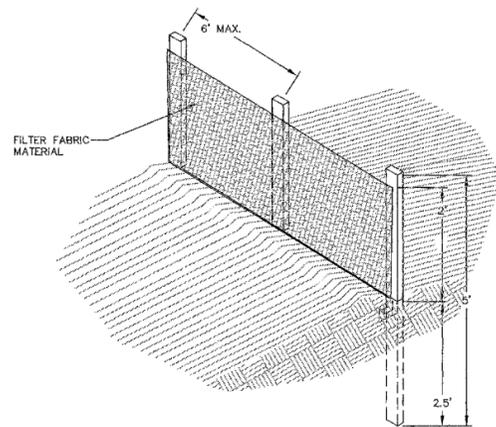
STABILIZED CONSTRUCTION ENTRANCE / TIRE WASH NTS (CE)

DEFINITION: A TEMPORARY SEDIMENT BARRIER CONSISTING OF A FILTER FABRIC STRETCHED ACROSS AND ATTACHED TO SUPPORTING POSTS AND ENTRENCHED. THE FILTER FABRIC IS CONSTRUCTED OF STAKES AND SYNTHETIC FILTER FABRIC WITH A RIGID WIRE FENCE BACKING WHERE NECESSARY FOR SUPPORT.

PURPOSE: 1. TO INTERCEPT AND DETAIN SMALL AMOUNTS OF SEDIMENT UNDER SHEET FLOW CONDITIONS FROM DISTURBED AREAS DURING CONSTRUCTION OPERATIONS IN ORDER TO PREVENT SEDIMENT FROM LEAVING THE SITE.
2. TO DECREASE THE VELOCITY OF SHEET FLOWS.

CONDITIONS WHERE PRACTICE APPLIES: FILTER FENCES MUST BE PROVIDED JUST UPSTREAM OF THE POINT(S) OF DISCHARGE OF RUNOFF FROM A SITE, BEFORE THE FLOW BECOMES CONCENTRATED. THEY MAY ALSO BE REQUIRED:

1. BELOW DISTURBED AREAS WHERE RUNOFF MAY OCCUR IN THE FORM OF SHEET AND RILL EROSION; WHEREVER RUNOFF HAS THE POTENTIAL TO IMPACT DOWNSTREAM RESOURCES.
2. PERPENDICULAR TO MINOR SWALES OR DITCH LINES FROM CONTRIBUTING DRAINAGE AREAS UP TO ONE ACRE IN SIZE.
3. CONTRACTOR SHALL COORDINATE WITH DESIGN ENGINEER FOR ACTUAL PLACEMENT LOCATIONS.



FILTER FENCE NTS (FF)

STANDARD NOTES: A. THE FILTER FABRIC FENCE SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID USE OF JOINTS. WHEN JOINTS ARE NECESSARY, OVERLAP FILTER CLOTH AND SECURELY FASTEN BOTH ENDS TO THE POST.

B. POSTS SHALL BE SPACED A MAXIMUM OF 6 FEET APART AND DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 30 INCHES (WHERE PHYSICALLY POSSIBLE).

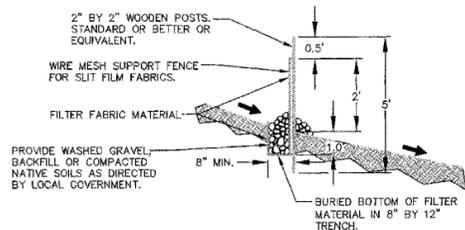
C. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 8 INCHES WIDE AND 12 INCHES DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER. THE TRENCH SHALL BE CONSTRUCTED TO FOLLOW THE CONTOUR.

D. WHEN SLIT FILM FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 1 INCH LONG, THE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 4 INCHES AND SHALL NOT EXTEND MORE THAN 38 INCHES ABOVE THE ORIGINAL GROUND SURFACE.

E. SLIT FILM FILTER FABRIC SHALL BE WIRED TO THE FENCE, AND 20 INCHES OF THE FABRIC SHALL EXTEND INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 38 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES. OTHER TYPES OF FABRIC MAY BE STAPLED TO THE FENCE.

F. WHEN EXTRA-STRENGTH OR MONOFILAMENT FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS WITH ALL OTHER PROVISIONS OF STANDARD NOTE "E" APPLYING. EXTRA CARE SHOULD BE USED WHEN JOINING OR OVERLAPPING THESE STRIPER FABRICS.

G. LOCAL GOVERNMENTS MAY SPECIFY THE USE OF PROPERLY COMPACTED NATIVE MATERIALS. IN MANY INSTANCES, THIS MAY BE THE PREFERRED ALTERNATIVE BECAUSE THE SOIL FORMS A MORE CONTINUOUS CONTACT WITH THE TRENCH BELOW.

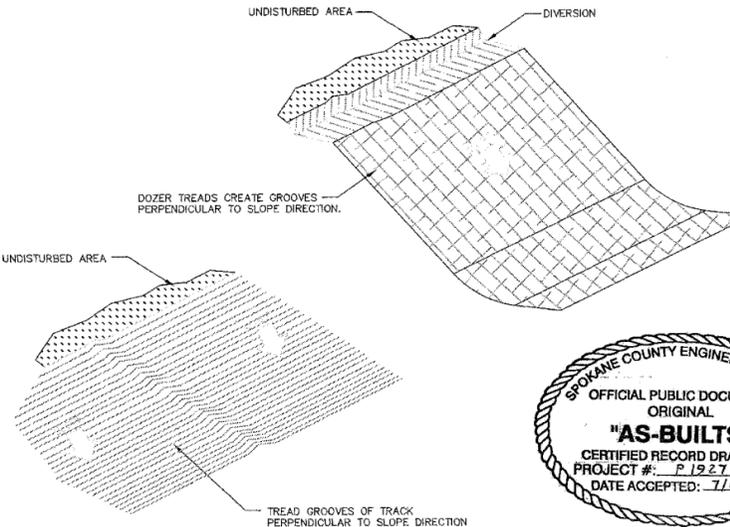


FILTER FENCE NTS (FF)

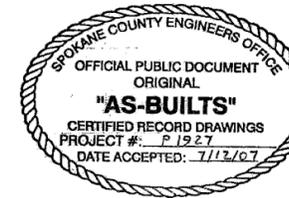
DEFINITION: PROVISION OF A ROUGH SOIL SURFACE WITH HORIZONTAL DEPRESSIONS CREATED BY OPERATING A TILLER OR OTHER SUITABLE EQUIPMENT ON THE CONTOUR OR BY LEAVING SLOPES IN A ROUGHED CONDITION BY NOT FILE GRADING THEM.

PURPOSE: TO AID IN ESTABLISHMENT OF VEGETATIVE COVER, REDUCE RUNOFF VELOCITY, INCREASE INFILTRATION, AND PROVIDE FOR SEDIMENT TRAPPING.

CONDITIONS WHERE PRACTICE APPLIES: ALL SLOPES STEEPER THAN 3:1, AND GREATER THAN 5 VERTICAL FEET, REQUIRE SURFACE ROUGHENING; EITHER STAIR-STEP GRADING, GROOVING, FURROWING, OR TRACKING IF THEY ARE TO BE STABILIZED WITH VEGETATION.



SURFACE ROUGHENING NTS (SR)



I have reviewed the construction of this project and to my knowledge find it to be in substantial conformance with the accepted plans and Spokane County Standards except as noted.

Surveying was provided by Storhaug Engineering.



PROPERTY OWNER/PERMIT APPLICANT/ CONTACT PERSON

KURT PARAS
HOMES BY GEORGE PARAS
603 N. HAVANA
SPOKANE, WA 99202
(509)535-8377

PROJECT / SITE DESCRIPTION

THE PROPOSED PROJECT INCLUDES THE DEVELOPMENT OF A RESIDENTIAL SUBDIVISION LOCATED NORTH OF WELLESLEY AVENUE AND EAST OF SIPPLE ROAD. THE GROUND SURFACE AT THE PROJECT SLOPES 2% TO 20% DOWN TO THE SOUTHEAST. THE MAJORITY OF THE SITE IS COVERED WITH PONDEROSA PINES.

SOIL TYPE

THE SOILS IN THIS REGION OF THE SUBJECT PROJECT HAVE BEEN IDENTIFIED AS MARBLE (TYPE "A"), SPOKANE (TYPE "C"), BERNHILL (TYPE "B") AND PHOEBE (TYPE "B").

ESC MEASURES

FILTER FENCE SHALL BE USED TO AID IN CONTAINING ANY SEDIMENT ON THE SITE DURING CONSTRUCTION. STABILIZED CONSTRUCTION ENTRANCES SHALL BE USED AT POINTS OF INGRESS AND EGRESS FOR CONSTRUCTION VEHICLES. DRYWELL/INLET PROTECTION SHALL BE USED AT ALL STORMWATER PIPE INLETS OR DRYWELLS.

REFER TO PLAN VIEW ON THIS SHEET FOR APPROXIMATE LOCATION OF THE ABOVE ITEMS.

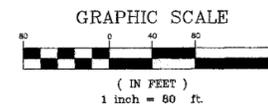
CERTIFICATION

THE EROSION AND SEDIMENT CONTROL PLAN MEETS THE REQUIREMENTS AS LISTED IN CHAPTER 4.5 OF THE GUIDELINES FOR STORMWATER MANAGEMENT. THIS ESC PLAN REPRESENTS A GUIDELINE FOR THE CONTRACTOR TO FOLLOW. THE CONTRACTOR SHALL BE RESPONSIBLE TO FOLLOW ALL SPOKANE COUNTY REQUIREMENTS FOR EROSION AND SEDIMENT CONTROL.

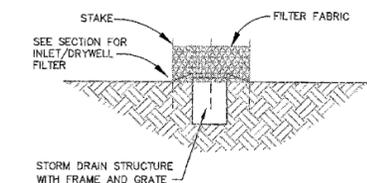
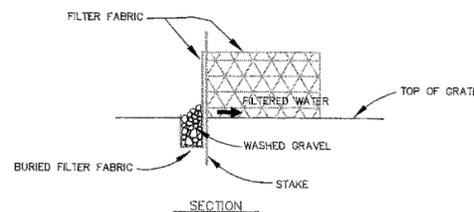
CFAD REIMBURNER, P.E. DATE

NOTE: REFER TO COVER AND INDEX SHEET FOR VICINITY MAP.

DEVELOPER DATE

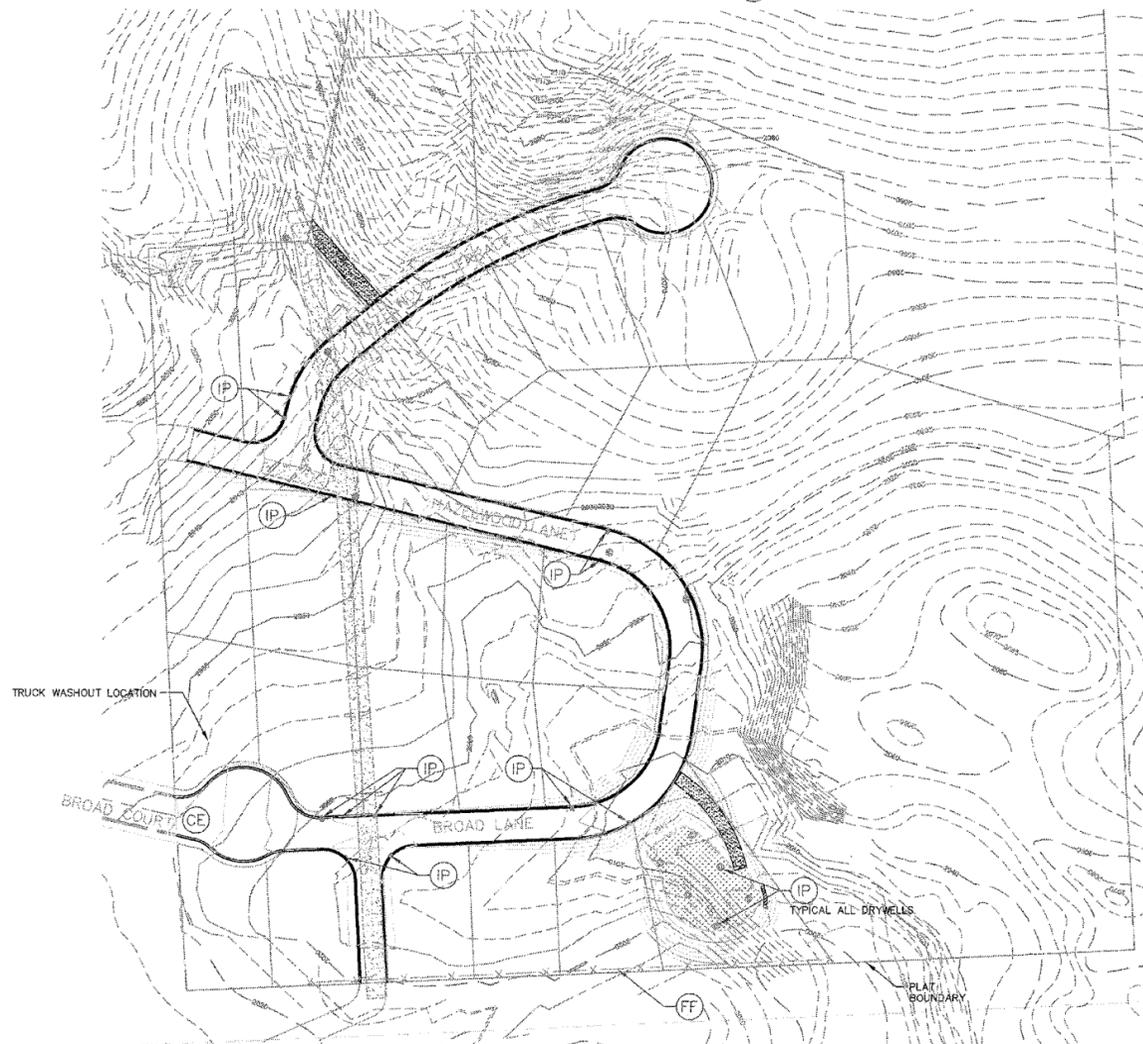


RECORD DRAWINGS



NOTE:
1. ALL DRYWELLS, INLETS, CATCH BASINS AND ANY OTHER STORMDRAIN FIXTURES WITH GRATED INLETS SHALL BE PROTECTED.
2. PROTECTION SHALL REMAIN IN PLACE UNTIL VEGETATION IS ESTABLISHED.

TEMPORARY INLET PROTECTION NTS (IP)



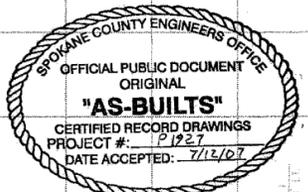
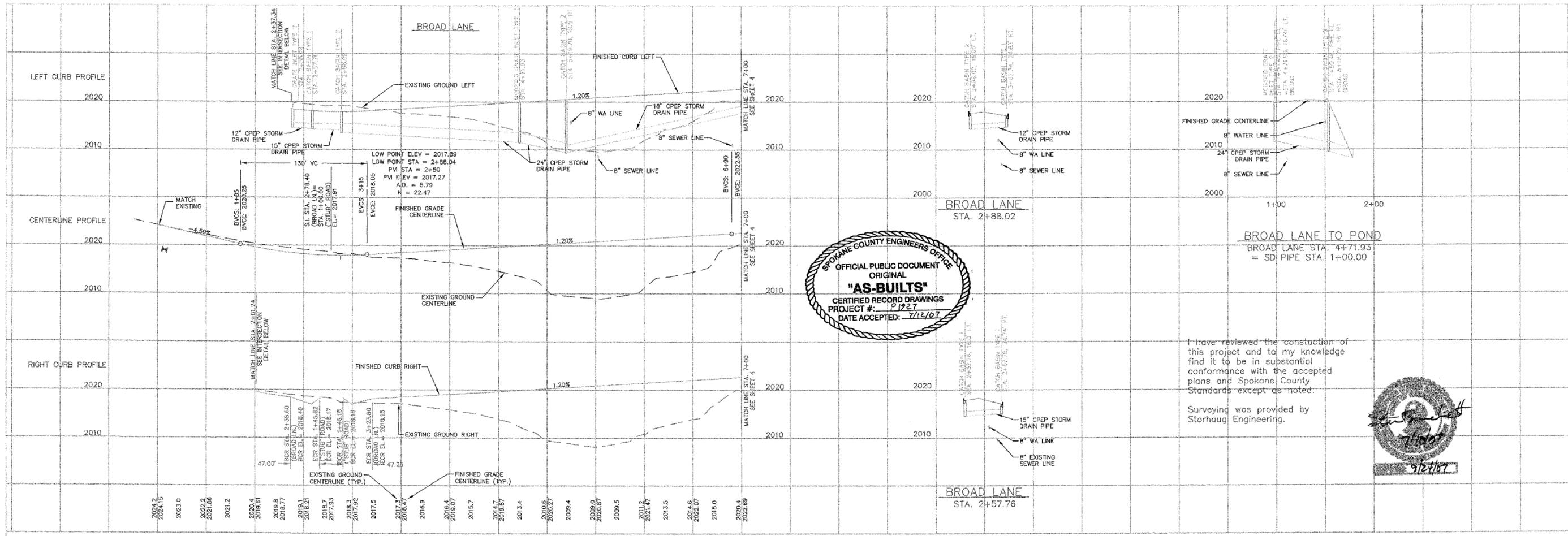
BENCHMARK

TBM: "4" ON SOUTH BOLT OF FIRE HYDRANT ON NORTH SIDE OF BROAD COURT PER SPOKANE COUNTY SANITARY SEWER PLANS. ELEVATION=2029.53 (NAVD88)

No.	DESC.	DATE	BY

EROSION / SEDIMENT CONTROL PLAN
HAZELWOOD PARK
SPOKANE COUNTY, WASHINGTON

DATE	10/20/05
DRAWN	KSN/JSC
CHECKED	CM
SCALE	AS SHOWN
PROJECT NUMBER	05028
DRAWING NO.	2 OF 8

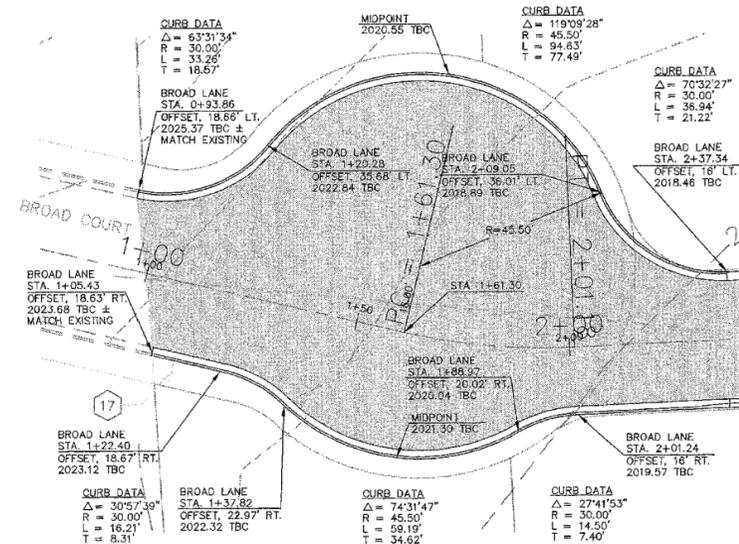
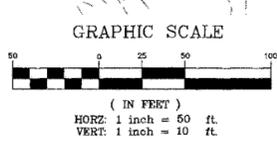
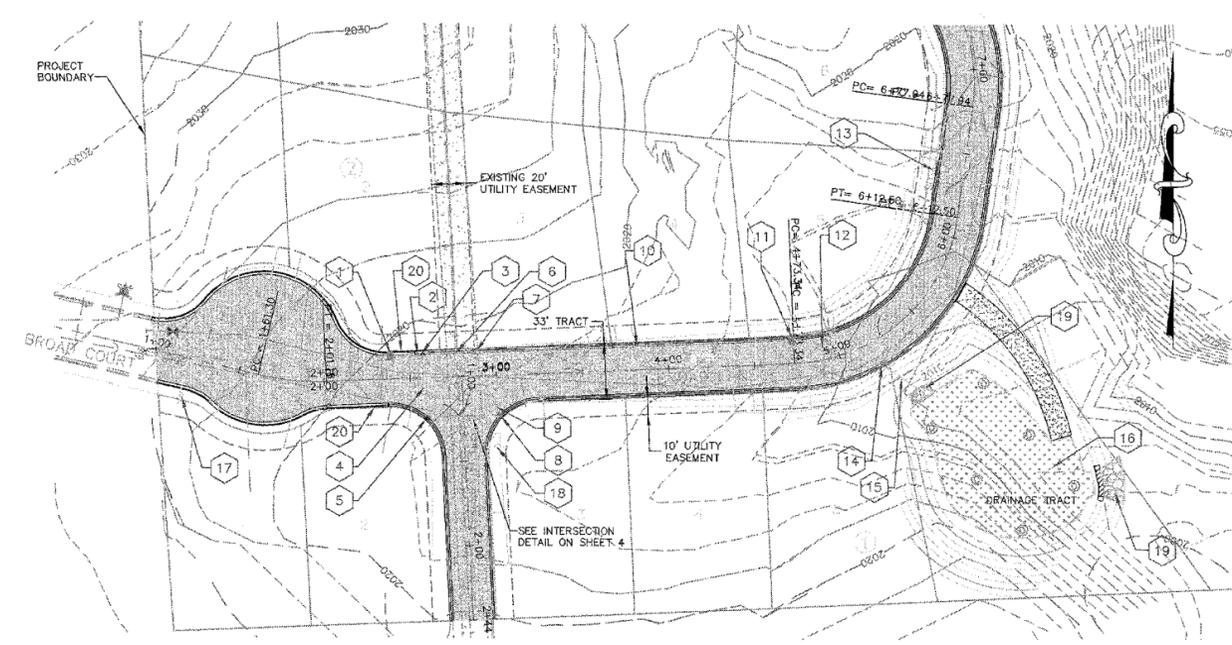


I have reviewed the construction of this project and to my knowledge find it to be in substantial conformance with the accepted plans and Spokane County Standards except as noted.

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RECORD DRAWINGS

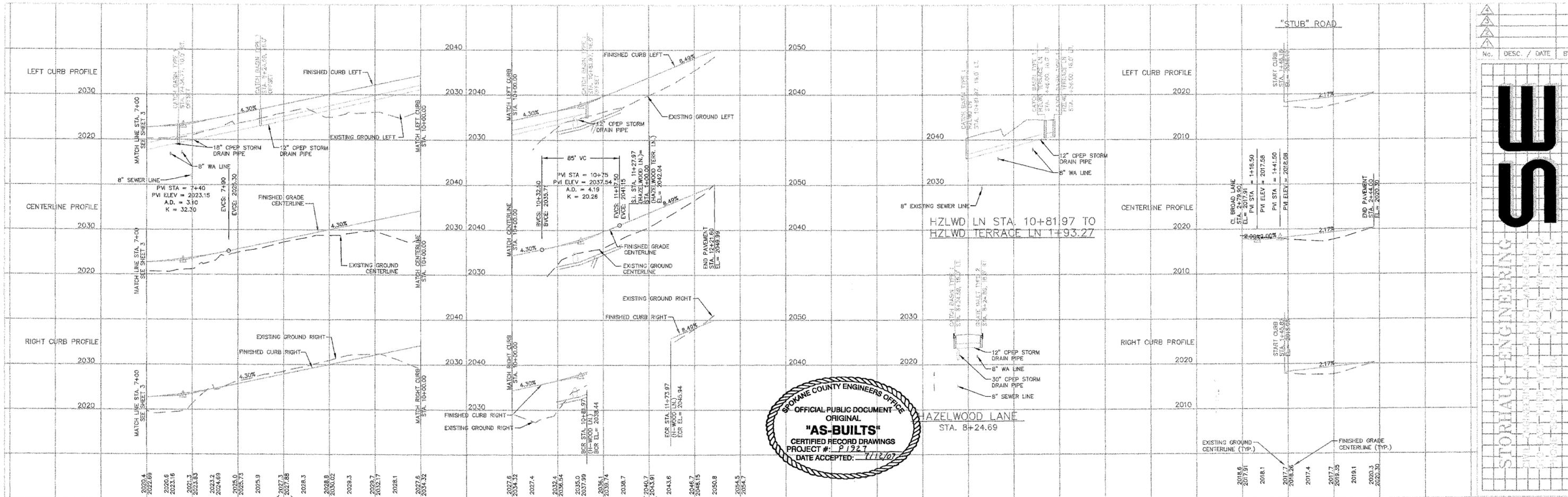


NOTES

- SEE CONSTRUCTION SPECIFICATIONS SHOWN ON DETAIL SHEET.
- ALL CURB RETURNS ARE 30' RADIUS AT BACK OF CURB UNLESS OTHERWISE SHOWN.
- ALL CURB AND OFFSET DATA IS REFERENCED TO BACK OF CURB, UNLESS OTHERWISE NOTED.
- THE UNDERGROUND UTILITY LINES AND OFF-SITE UTILITIES LOCATION HAVE BEEN EXTRACTED FROM RECORD UTILITY DRAWINGS AND FOUND SURFACE FEATURES. FIELD VERIFY EXACT LOCATIONS.
- EXISTING OVERHEAD POWER, TELEPHONE AND OTHER UTILITIES WITHIN THE PROPOSED ROADWAY OF BROAD COURT SHALL BE RELOCATED AS NEEDED PRIOR TO CONSTRUCTION.
- 1.0' (MIN.) OF COVER SHALL BE MAINTAINED OVER ALL STORM DRAIN PIPES.
- CURB INLETS SHALL BE CONSTRUCTED AT 2" LOWER THAN THE FLOW LINE OF THE CURB. ASPHALT AND CURB TO HAVE SMOOTH TAPER INTO CURB INLETS.
- THE W.S.D.O.T. TYPE 2 INLET SHALL BE PLACED SO THAT THE LONGER SIDE OF THE STRUCTURE IS PERPENDICULAR TO THE CURB. THE SHORTER SIDE SHALL ABUT THE FACE OF THE CURB.
- INLETS AND CATCH BASINS WITH TYPE 2 METAL FRAMES SHALL HAVE A FULL TYPE B CURB AND GUTTER SECTION 6" ON EACH SIDE OF THE INLET OR CATCH BASIN. THE CONTRACTOR SHALL PROVIDE A SMOOTH TRANSITION FROM TYPE R TO TYPE B CURB PRIOR TO 6" ON EACH SIDE OF THE INLET OR CATCH BASIN. SEE DETAIL SHEET FOR TRANSITION.
- CONTRACTOR SHALL VERIFY SANITARY SEWER SERVICE AND WATER SERVICE ELEVATIONS AT ALL CROSSINGS PRIOR TO INSTALLATIONS.

BENCHMARK
TBM: "+1" ON SOUTH BOLT OF FIRE HYDRANT ON NORTH SIDE OF BROAD COURT PER SPOKANE COUNTY SANITARY SEWER PLANS.
ELEVATION=2029.53 (NAVD88)

P-1927 EngAsBuilt



STORHAUG ENGINEERING
 CIVIL ENGINEERING
 1000 N. PARKWAY
 SPOKANE, WASHINGTON 99208
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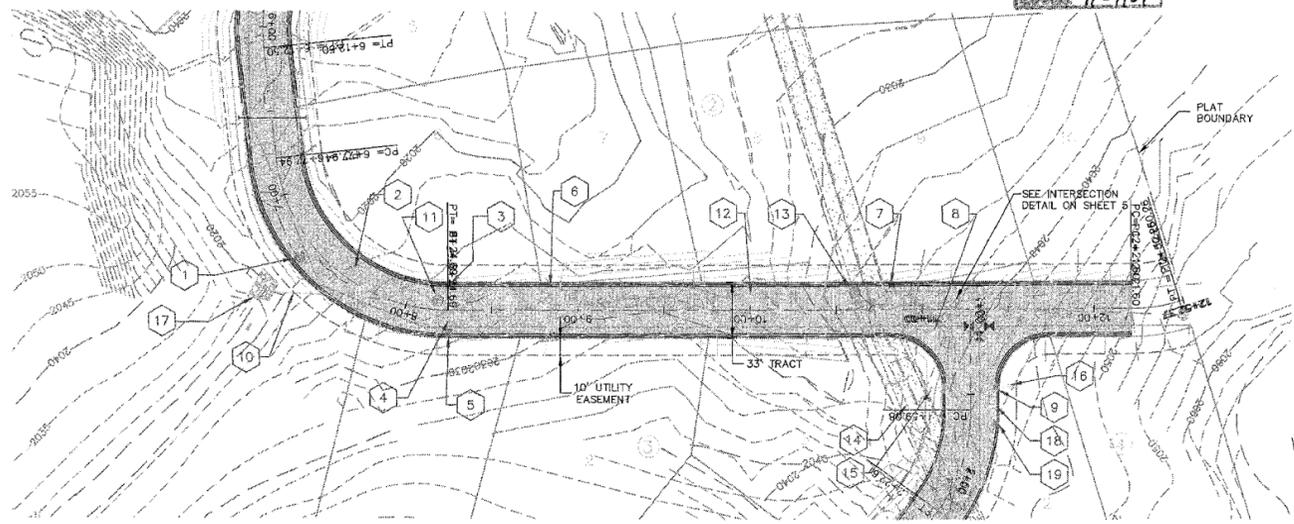
No. DESC. / DATE BY

W
S

RECORD DRAWINGS

I have reviewed the construction of this project and to my knowledge find it to be in substantial conformance with the accepted plans and Spokane County Standards except as noted.

Surveying was provided by Storhaug Engineering.



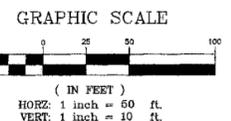
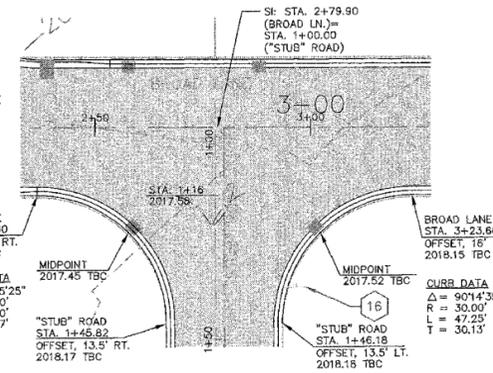
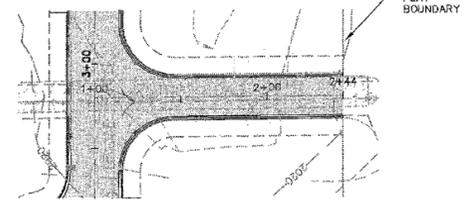
- 1 CATCH BASIN TYPE 1 SPOKANE COUNTY STD. B-4 W/ TYPE 4 FRAME, STD. B-15, AND SOLID LID, STD. B-15, STA. 7+34.77, 10.00' RT. GRATE EL. = 2023.20 IE. = 2019.30 (W) IE. = 2019.20 (S)
- 2 18" CPEP STORM DRAIN PIPE L = 88' S = 4.1%
- 3 CATCH BASIN TYPE 1 SPOKANE COUNTY STD. B-4 W/TYPE 1 METAL FRAME, STD. B-10, AND TYPE 1 METAL GRATE, STD. B-12, STA. 8+24.69, 15.00' LT. GRATE EL. = 2026.37 IE. = 2022.82 (E) IE. = 2023.22 (W) IE. = 2023.72 (N)
- 4 12" CPEP STORM DRAIN PIPE L = 29' S = 0.5%
- 5 GRATE INLET TYPE 2 WSDOT STD. B-4c W/FRAME AND VANED GRATE, WSDOT STD. B-4d SEE NOTE 9 STA. 8+24.69, 16.00' RT. GRATE EL. = 2026.37 IE. = 2023.87 (OUT)

- 6 12" CPEP STORM DRAIN PIPE L = 257' S = 4.0%
- 7 CATCH BASIN TYPE 1 SPOKANE COUNTY STD. B-4 W/TYPE 1 METAL FRAME, STD. B-10, AND TYPE 1 METAL GRATE, STD. B-12, STA. 10+81.97, 16.00' LT. GRATE EL. = 2038.02 IE. = 2033.71 (NW) IE. = 2033.61 (E)
- 8 12" CPEP STORM DRAIN PIPE L = 85' S = 5.3%
- 9 CATCH BASIN TYPE 1 SPOKANE COUNTY STD. B-4 W/TYPE 2 METAL FRAME, STD. B-11, AND TYPE 3 METAL GRATE, STD. B-14, STA. 1+46.00, 16.00' LT. GRATE EL. = 2041.74 IE. = 2038.23 (OUT) SEE NOTE 9.
- 10 36" CPEP STORM DRAIN PIPE L = 95' S = 0.5% IE. = 2020.60 (OUT) SEE RIPRAP TABLE ON DETAIL SHEET.

- 11 MANHOLE TYPE III-60 SPOKANE COUNTY STD. U-6 W/ TYPE 4 FRAME AND SOLID LID, STA. 8+18.32, 5.41' LT. GRATE EL. = 2028.59 IE. = 2020.48
- 12 30" CPEP STORM DRAIN PIPE L = 242.0' S = 2.0%
- 13 MODIFIED MANHOLE TYPE III-60 (5.5' DEPTH) SPOKANE COUNTY STD. U-6 W/ TYPE 4 FRAME AND SOLID LID, STA. 10+60.95, 10.00' LT. GRATE EL. = 2035.91 IE. = 2031.44 (E.N)
- 14 30" CPEP STORM DRAIN PIPE L = 136' S = 3.2%
- 15 "NO OUTLET" SIGN PER M.U.T.C.D. STANDARDS.
- 16 STOP AND STREET SIGNS PER M.U.T.C.D. STANDARDS.
- 17 RIP RAP, SEE DETAIL SHEET
- 18 12" CPEP STORM DRAIN PIPE L = 20' S = 2.0%
- 19 CATCH BASIN TYPE 1 SPOKANE COUNTY STD. B-4 W/TYPE 2 METAL FRAME, STD. B-11, AND TYPE 3 METAL GRATE, STD. B-14, STA. 1+46.00, 16.00' LT. GRATE EL. = 2042.28 IE. = 2038.73 (OUT) SEE NOTE 9.

NOTES

1. SEE CONSTRUCTION SPECIFICATIONS SHOWN ON DETAIL SHEET.
2. ALL CURB RETURNS ARE 30' RADIUS AT BACK OF CURB UNLESS OTHERWISE SHOWN.
3. ALL CURB AND OFFSET DATA IS REFERENCED TO BACK OF CURB, UNLESS OTHERWISE NOTED.
4. THE UNDERGROUND UTILITY LINES AND OFF-SITE UTILITIES LOCATION HAVE BEEN EXTRACTED FROM RECORD UTILITY DRAWINGS AND FOUND SURFACE FEATURES. FIELD VERIFY EXACT LOCATIONS.
5. EXISTING OVERHEAD POWER, TELEPHONE AND OTHER UTILITIES WITHIN THE PROPOSED ROADWAY OF BROAD COURT SHALL BE RELOCATED AS NEEDED PRIOR TO CONSTRUCTION.
6. 1.0' (MIN.) OF COVER SHALL BE MAINTAINED OVER ALL STORM DRAIN PIPES.
7. CURB INLETS SHALL BE CONSTRUCTED AT 2" LOWER THAN THE FLOW LINE OF THE CURB. ASPHALT AND CURB TO HAVE SMOOTH TAPER INTO CURB INLETS.
8. THE W.S.D.O.T. TYPE 2 INLET SHALL BE PLACED SO THAT THE LONGER SIDE OF THE STRUCTURE IS PERPENDICULAR TO THE CURB. THE SHORTER SIDE SHALL ABUT THE FACE OF THE CURB.
9. INLETS AND CATCH BASINS WITH TYPE 2 METAL FRAMES SHALL HAVE A FULL TYPE B CURB AND GUTTER SECTION 6' ON EACH SIDE OF THE INLET OR CATCH BASIN. THE CONTRACTOR SHALL PROVIDE A SMOOTH TRANSITION FROM TYPE R TO TYPE B CURB PRIOR TO 6' ON EACH SIDE OF THE INLET OR CATCH BASIN. SEE DETAIL SHEET FOR TRANSITION.
10. CONTRACTOR SHALL VERIFY SANITARY SEWER SERVICE AND WATER SERVICE ELEVATIONS AT ALL CROSSINGS PRIOR TO INSTALLATIONS.



BENCHMARK
 TBM: "4" ON SOUTH BOLT OF FIRE HYDRANT ON NORTH SIDE OF BROAD COURT PER SPOKANE COUNTY SANITARY SEWER PLANS. ELEVATION=2029.53 (NAVDS8)

HAZELWOOD LANE
 PLAN AND PROFILE STA. 7+00 TO 12+32

HAZELWOOD PARK
 SPOKANE COUNTY, WASHINGTON

SHEET TITLE
 SEAL

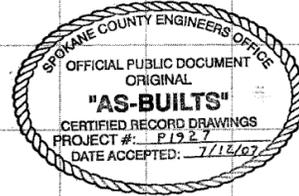
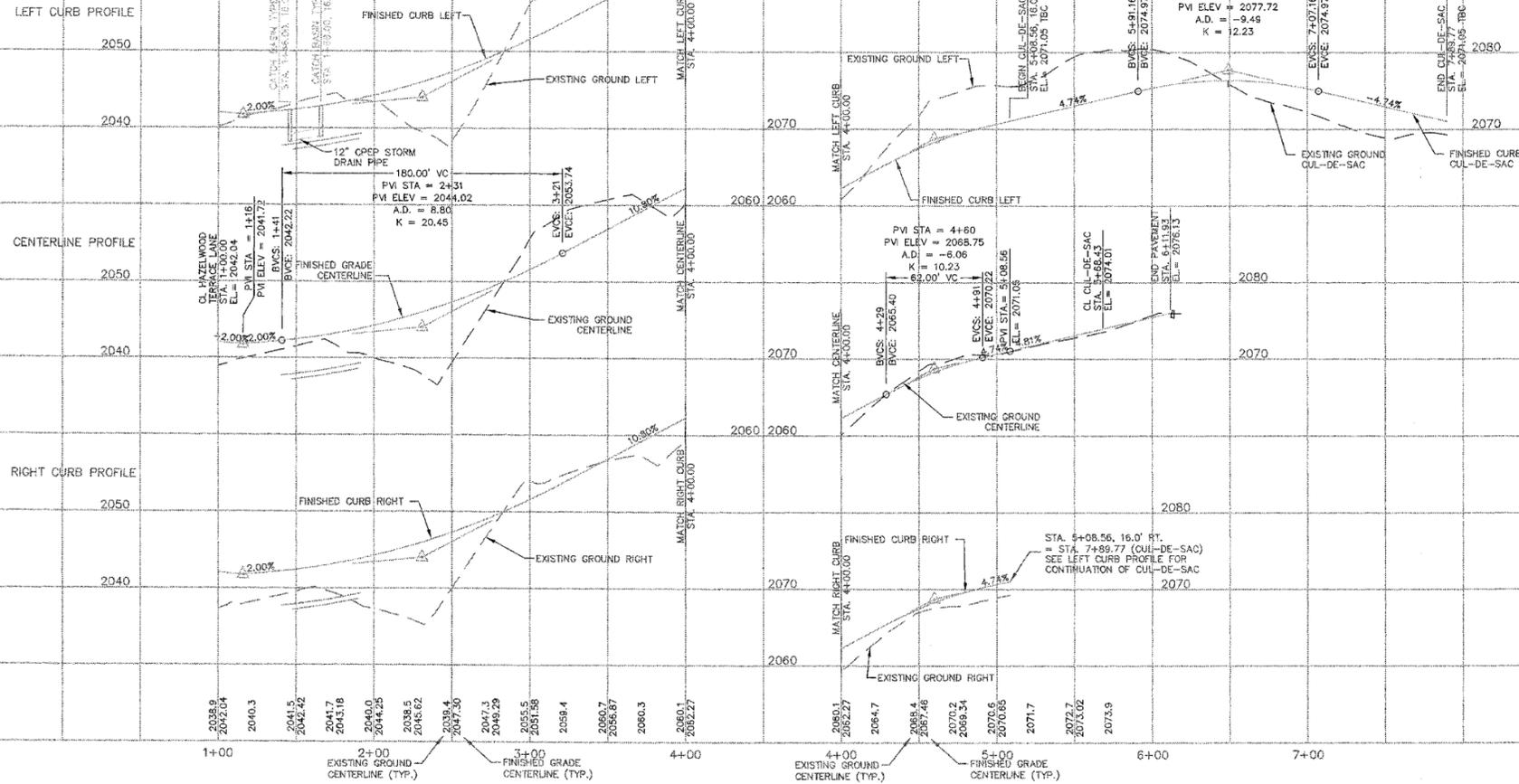
DATE 10/20/05
 DRAWN KSN/JSC
 CHECKED CM
 SCALE AS SHOWN
 PROJECT NUMBER 05028
 DRAWING NO. 4 OF 8

DEVELOPER DATE

STREET

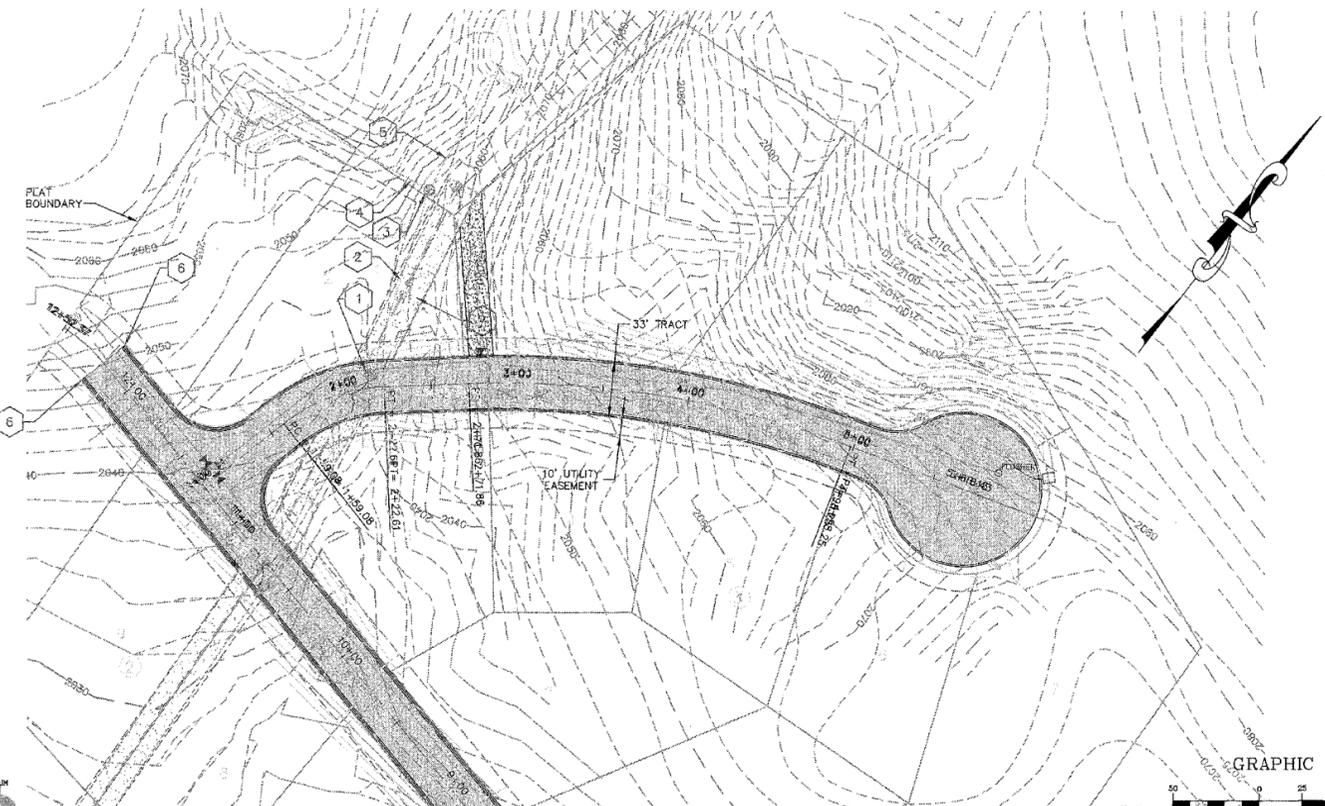
HAZELWOOD TERRACE LANE

CUL-DE-SAC PROFILE



WES
STORHAUG ENGINEERING
1100 N. PARKWAY
SPOKANE, WASHINGTON 99208
PH: 509.325.2222 FAX: 509.325.2223

No.	DESC.	DATE	BY



TABLE

1	MANHOLE TYPE III-60 SPOKANE COUNTY STD. U-6 W/ TYPE 4 FRAME AND SOLID LID. STA. 2+18.47, 7'18" LT. GRATE EL = 2044.91 IE = 2035.91	5	30" CPEP STORM DRAIN PIPE L = 90' S = 11.3% IE = 2048.50
2	30" CPEP STORM DRAIN PIPE L = 113' S = 2.4%	6	CURB NOSE DOWN SEE DETAIL SHEET 7
3	MANHOLE TYPE III-60 SPOKANE COUNTY STD. U-6 W/ TYPE 4 FRAME AND SOLID LID. STA. 2+54.08, 114.63' LT. GRATE EL = 2046.02 IE = 2038.33 (S.N.) IE = 2038.73 (W)	7	REBULB SEWER ACCESS EASEMENT CONDITIONS. 6" CRUSHED ROCK TOP COURSE, 3/4" MINUS COMPACTED TO 95% MAX. DENSITY (ASTM D698).
4	24" CPEP STORM DRAIN PIPE L = 116' S = 12.5% IE = 2058.00	8	STOP AND STREET SIGNS PER M.U.T.C.D. STANDARDS.
		9	"NO OUTLET" SIGN PER M.U.T.C.D. STANDARDS.

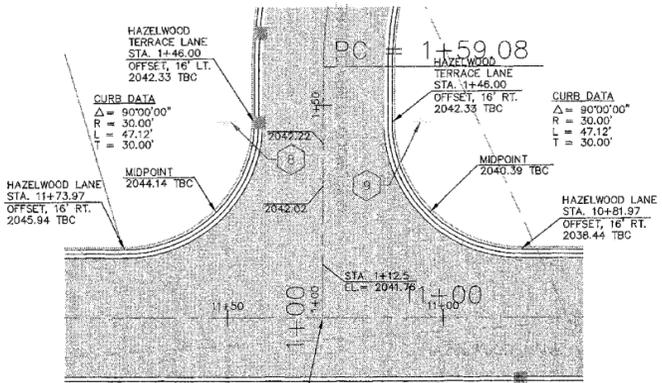
- NOTES**
- SEE CONSTRUCTION SPECIFICATIONS SHOWN ON DETAIL SHEET.
 - ALL CURB RETURNS ARE 30' RADIUS AT BACK OF CURB UNLESS OTHERWISE SHOWN.
 - ALL CURB AND OFFSET DATA IS REFERENCED TO BACK OF CURB, UNLESS OTHERWISE NOTED.
 - THE UNDERGROUND UTILITY LINES AND OFF-SITE UTILITIES LOCATION HAVE BEEN EXTRACTED FROM RECORD UTILITY DRAWINGS AND FOUND SURFACE FEATURES. FIELD VERIFY EXACT LOCATIONS.
 - EXISTING OVERHEAD POWER, TELEPHONE AND OTHER UTILITIES WITHIN THE PROPOSED ROADWAY OF BROAD COURT SHALL BE RELOCATED AS NEEDED PRIOR TO CONSTRUCTION.
 - 1.0' (MIN.) OF COVER SHALL BE MAINTAINED OVER ALL STORM DRAIN PIPES.
 - CURB INLETS SHALL BE CONSTRUCTED AT 2" LOWER THAN THE FLOW LINE OF THE CURB. ASPHALT AND CURB TO HAVE SMOOTH TAPER INTO CURB INLETS.
 - THE W.S.D.O.T. TYPE 2 INLET SHALL BE PLACED SO THAT THE LONGER SIDE OF THE STRUCTURE IS PERPENDICULAR TO THE CURB. THE SHORTER SIDE SHALL ABUT THE FACE OF THE CURB.
 - INLETS AND CATCH BASINS WITH TYPE 2 METAL FRAMES SHALL HAVE A FULL TYPE B CURB AND GUTTER SECTION 6" ON EACH SIDE OF THE INLET OR CATCH BASIN. THE CONTRACTOR SHALL PROVIDE A SMOOTH TRANSITION FROM TYPE R TO TYPE B CURB PRIOR TO 6" ON EACH SIDE OF THE INLET OR CATCH BASIN. SEE DETAIL SHEET FOR TRANSITION.
 - CONTRACTOR SHALL VERIFY SANITARY SEWER SERVICE AND WATER SERVICE ELEVATIONS AT ALL CROSSINGS PRIOR TO INSTALLATIONS.

RECORD DRAWINGS

I have reviewed the construction of this project and to my knowledge find it to be in substantial conformance with the accepted plans and Spokane County Standards except as noted.



Surveying was provided by Storhaug Engineering.



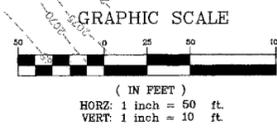
INTERSECTION DETAIL
SCALE 1" = 20'

HAZELWOOD TERRACE LANE
PLAN AND PROFILE
HAZELWOOD PARK
SPOKANE COUNTY, WASHINGTON

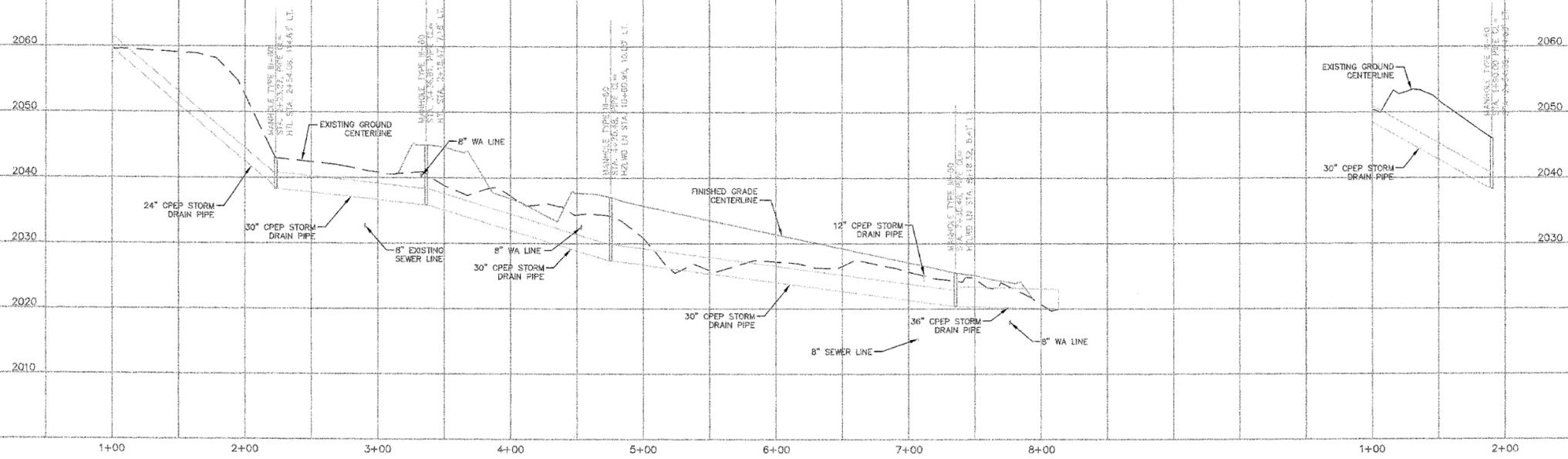
SHEET TITLE: PROJECT TITLE: SEAL: DATE: 10/20/05
DRAWN: KSN/JSC
CHECKED: CM
SCALE: AS SHOWN
PROJECT NUMBER: 05028
DRAWING NO.: 5 OF 8

05028-CADWG ST-3

BENCHMARK
T.M. "4" ON SOUTH BOLT OF FIRE HYDRANT ON NORTH SIDE OF BROAD COURT PER SPOKANE COUNTY SANITARY SEWER PLANS. ELEVATION=2029.53 (NAVD88)



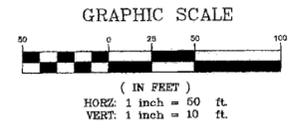
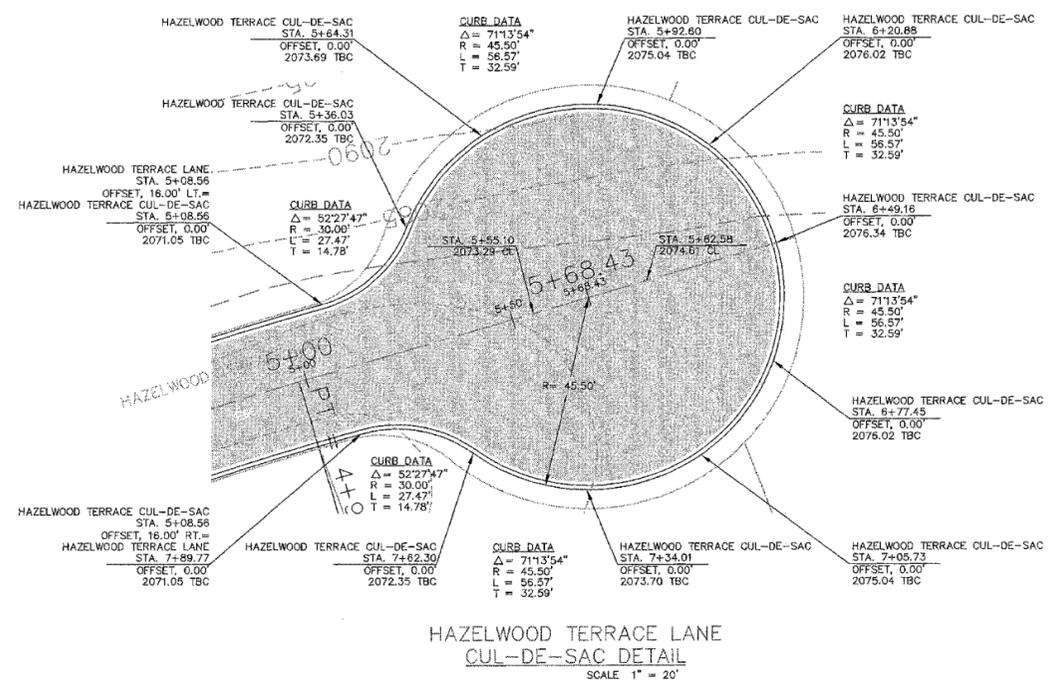
BYPASS STORM PIPE PROFILES



RECORD DRAWINGS

I have reviewed the construction of this project and to my knowledge find it to be in substantial conformance with the accepted plans and Spokane County Standards except as noted.

Surveying was provided by Storhaug Engineering.



SHEET TITLE: BYPASS PIPE PROFILE AND HTL CUL-DE-SAC DETAIL

PROJECT TITLE: HAZELWOOD PARK HAZELWOOD COUNTY, WASHINGTON

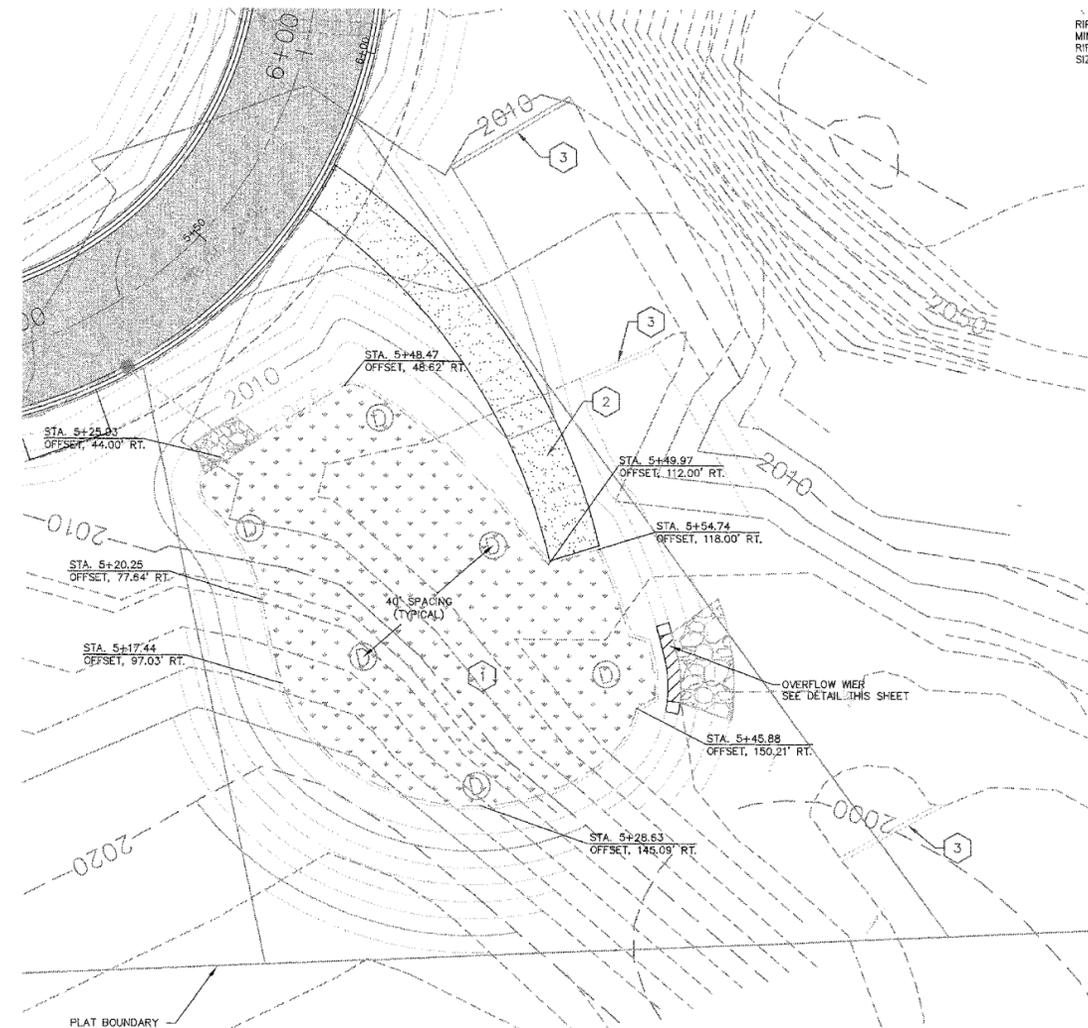
DATE	10/20/05
DRAWN	JSC
CHECKED	CM
SCALE	AS SHOWN
PROJECT NUMBER	05028
DRAWING NO.	6 OF 8

BENCHMARK

TM: "4" ON SOUTH BOLT OF FIRE HYDRANT ON NORTH SIDE OF BROAD COURT PER SPOKANE COUNTY SANITARY SEWER PLANS. ELEVATION=2029.53 (NAVD85)

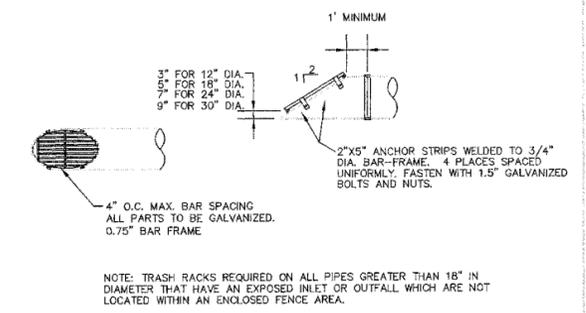
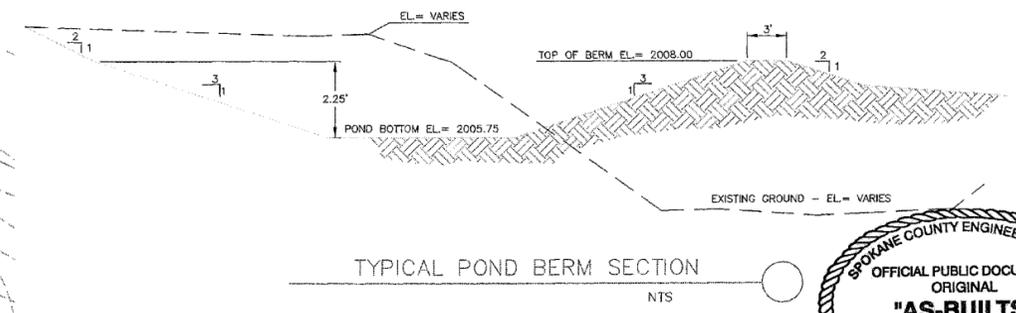
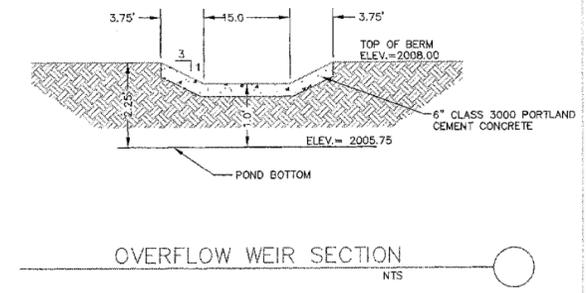
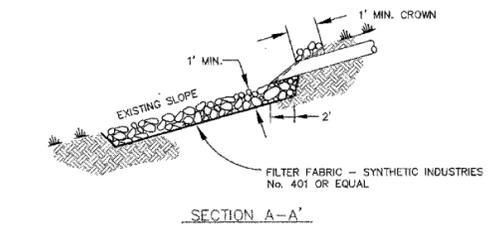
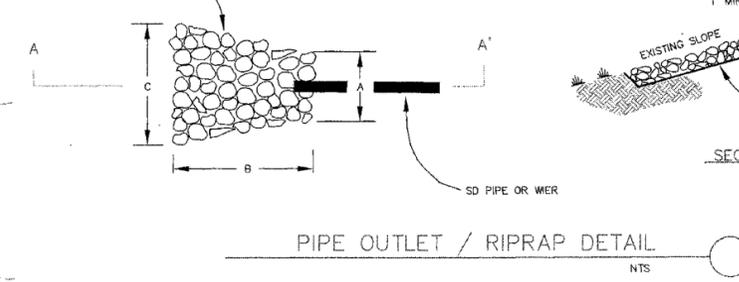
RECORD DRAWINGS

STORHAUG ENGINEERING
 1000 N. PARKWAY
 SPOKANE, IDAHO 83402
 TEL: 208.325.1100
 FAX: 208.325.1101
 WWW.STORHAUGENGINEERING.COM



LOCATION	A	B	C	MIN.	AVG.	MAX.	THICKNESS
WEIR	15.0'	11.0'	18.4'	1.5"	6.0"	8.3"	12.0"
BYPASS 36" PIPE	9.0'	45.7'	27.3'	1.5"	6.0"	8.3"	12.0"
POND 24" PIPE	6.0'	27.3'	17.0'	2.3"	9.0"	12.4"	12.0"

RIPRAP AT PIPE OUTLET WITH MINIMUM DIMENSIONS PER TABLE. RIPRAP TO CONSIST OF FIELD ROCK SIZED PER RIPRAP TABLE.



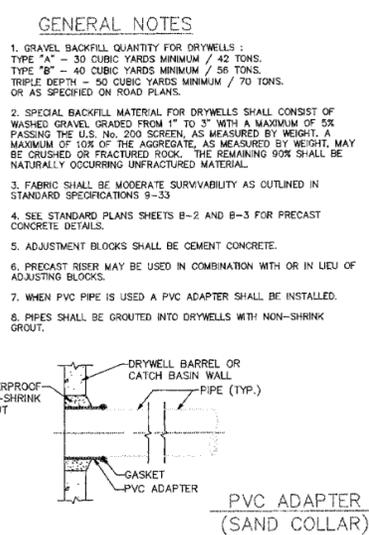
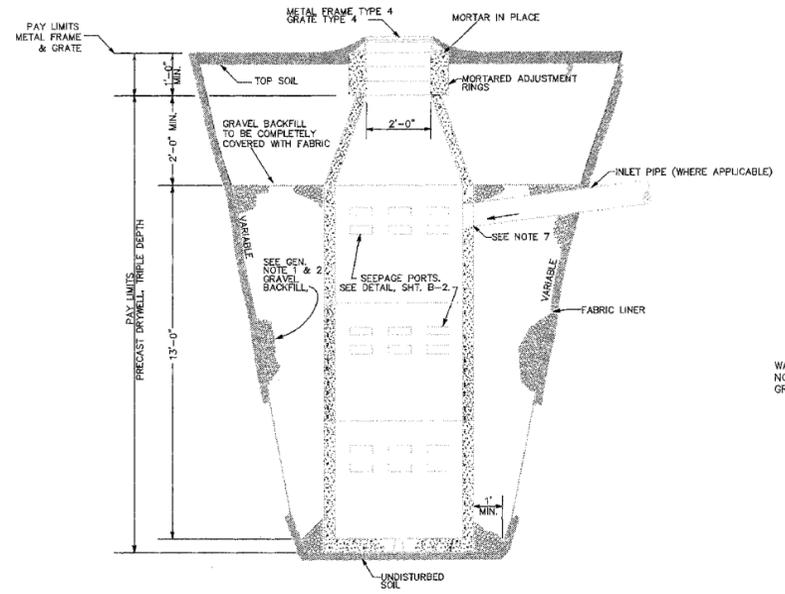
SPOKANE COUNTY ENGINEERS OFFICE
 OFFICIAL PUBLIC DOCUMENT
 ORIGINAL
"AS-BUILTS"
 CERTIFIED RECORD DRAWINGS
 PROJECT #: P1927
 DATE ACCEPTED: 7/12/07

DETENTION POND "A"
 1" = 20'

- NOTES:
1. THE DETENTION POND BERM SHALL BE CONSTRUCTED UNDER THE OBSERVATION OF THE GEOTECHNICAL ENGINEER AND MEET THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
 2. THE CONTRACTOR SHALL COORDINATE WITH THE DESIGN ENGINEER AND GEOTECHNICAL ENGINEER TO VERIFY IN PLACE INFILTRATION OF INITIAL DRYWELL INSTALLED.
 3. THE POND BERM SHALL BE CONSTRUCTED OF NATIVE MATERIAL OR SIMILAR GRANULAR SOIL. THE BERM SHALL BE COMPACTED TO 95% OF THE MAXIMUM UNIT WEIGHT AS DETERMINED BY THE MODIFIED PROCTOR METHOD AND INSTALLED AT A MAXIMUM OF 6" LIFTS.

TABLE

1. DETENTION POND "A"
 BOTTOM EL. = 2005.75
 BOTTOM AREA = 6376 SF.
 DEPTH = 2.25'
 (6) TRIPLE DEPTH DRYWELLS
 SEE DETAIL THIS SHEET
 RIM EL. = 2006.25
 MAK. WATER SURFACE EL. = 2007.05 (50-YEAR) FOR SEEDING SPECIFICATIONS SEE DETAIL SHEET 8 OF 8.
2. 12' WIDE GRAVEL ACCESS ROAD.
 6" CRUSHED ROCK TOP COURSE,
 3/4" MINUS COMPACTED TO 95%
 MAX. DENSITY (ASTM D898).
 MAXIMUM SLOPE SHALL BE 5:1 (20%).
3. 1' HIGH AND WIDE DITCH BERM
 (TYPICAL 3 LOCATIONS). SEE DETAIL SHEET 8 OF 8.



- GENERAL NOTES
1. GRAVEL BACKFILL QUANTITY FOR DRYWELLS:
 TYPE "A" - 30 CUBIC YARDS MINIMUM / 42 TONS.
 TYPE "B" - 40 CUBIC YARDS MINIMUM / 56 TONS.
 TRIPLE DEPTH - 50 CUBIC YARDS MINIMUM / 70 TONS.
 OR AS SPECIFIED ON ROAD PLANS.
 2. SPECIAL BACKFILL MATERIAL FOR DRYWELLS SHALL CONSIST OF WASHED GRAVEL GRADED FROM 1" TO 3" WITH A MAXIMUM OF 5% PASSING THE U.S. No. 200 SCREEN, AS MEASURED BY WEIGHT. A MAXIMUM OF 10% OF THE AGGREGATE, AS MEASURED BY WEIGHT, MAY BE CRUSHED OR FRACTURED ROCK. THE REMAINING 90% SHALL BE NATURALLY OCCURRING UNFRACTURED MATERIAL.
 3. FABRIC SHALL BE MODERATE SURVIVABILITY AS OUTLINED IN STANDARD SPECIFICATIONS 9-33.
 4. SEE STANDARD PLANS SHEETS B-2 AND B-3 FOR PRECAST CONCRETE DETAILS.
 5. ADJUSTMENT BLOCKS SHALL BE CEMENT CONCRETE.
 6. PRECAST RISER MAY BE USED IN COMBINATION WITH OR IN LIEU OF ADJUSTING BLOCKS.
 7. WHEN PVC PIPE IS USED A PVC ADAPTER SHALL BE INSTALLED.
 8. PIPES SHALL BE GROUTED INTO DRYWELLS WITH NON-SHRINK GROUT.

I have reviewed the construction of this project and to my knowledge find it to be in substantial conformance with the accepted plans and Spokane County Standards except as noted.

Surveying was provided by Storhaug Engineering.



DETECTION POND AND DETAIL SHEET

HAZELWOOD PARK
 SPOKANE COUNTY, WASHINGTON

SHEET TITLE
 SEAL

PROJECT TITLE

DATE 10/20/05
 DRAWN KSM/JSC
 CHECKED CM
 SCALE AS SHOWN
 PROJECT NUMBER 05028
 DRAWING NO. 7 OF 8

DEVELOPER DATE

DETAIL

RECORD DRAWINGS

- All work and materials shall be in conformance with the "SPOKANE COUNTY STANDARDS FOR ROAD AND SEWER CONSTRUCTION" 1999, and as amended.
- Locations of existing utilities shown in the plans are approximate. Prior to site construction, the Contractor shall be responsible for locating all underground and overhead utilities. Any conflicting utilities shall be relocated prior to construction of road and drainage facilities. Call the underground utility location service at 456-8000 before you dig.
- The Contractor is required to have a complete set of the approved road and drainage plans on the job site whenever construction is in progress.
- If the Contractor discovers any discrepancies between the plans and existing conditions encountered, the Contractor shall immediately notify the Design Engineer.
- For construction of drywells, install filter fabric (Amoco 4545 or approved equivalent) between the washed drain rock and the native soils.
- For any curb grades less than 0.8% (0.008 ft/ft), a Washington State licensed Professional Land Surveyor shall verify that the curb forms are at the grades noted on the approved plans, prior to placement of curb material. The Contractor is responsible for arranging and coordinating work with the Professional Land Surveyor.
- The Contractor shall employ a licensed surveyor to verify that the cross gutter forms are at the correct plane grade prior to concrete placement. The cross gutters shall be constructed prior to paving, and the pavement shall then match the edge of concrete gutter.
- The contractor shall review all geotechnical recommendations and investigation reports associated with the subject development prior to starting construction. Any discrepancies between design plans and geotechnical report shall be reported to the Design Engineer. Construction shall comply with recommendations of the geotechnical reports.
- The contractor shall demolish and remove existing structures and associated improvements on the subject site prior to starting construction. Contractor shall coordinate demolition activities with owner for further direction and extent of work.
- The floor of a Graded Percolation Area (GPA) swale includes the level portion of the floor of the swale, and the side slopes of the swale up to the GPA overflow elevation or top of drywell. The soil located in the floor of the GPA swale shall be a medium to well-draining material, with a minimum infiltration rate of 0.5 inches per hour. The Engineer shall provide a written statement which verifies that all GPA swales conform to this requirement. This written statement shall be submitted to the Spokane County Engineer's Office prior to installing finished landscaping/sod and prior to final acceptance. The swale floor material shall be installed to a native soil stratum which also meets or exceeds this minimum percolation rate of 0.5 inches per hour.
- Irrigation system for storm water management ponds shall be provided by Contractor/Developer. Irrigation system shall be design/build.
- ER1) An Erosion /Sedimentation Control (ESC) plan is required for this project. Implementation of the ESC plan, and construction, maintenance, and upgrading of the ESC facilities are the responsibility of the Developer until all construction is completed and accepted by Spokane County, or until vegetation is established throughout the site, and accepted by Spokane County, whichever is later.
- ER2) Approval of the ESC plan does not constitute approval of any of the proposed road, storm drainage, grading or utility design elements shown on the ESC plan.
- ER3) The Erosion /Sedimentation control measures shown are the minimum requirements for the anticipated site conditions. The Contractor shall inspect and maintain these ESC measures daily, and shall maintain and upgrade these measures as necessary to prevent sediment-laden water from either flowing off the site, or into new or existing storm drainage facilities, such as drywells, culverts, or gravel galleries.
- ER4) The Contractor /Developer is responsible for installing Rock Construction Entries at any and all locations used to enter or exit the project site.
- ER5) Geotextile fabric is to be placed on the rims of drywells, catch basins and inlets until such time the vegetation on the site is established and the threat of sediment deposition into the drainage system is mitigated.

CONSTRUCTION SPECIFICATIONS

Provide fresh, clean new crop seed complying with tolerance for purity and germination established by Official Seed Analysis of North America. Provide seed mixture composed of grass species and percentages as follows:

20 percent Eika Perennial Rye

20 percent Durar Hard Fescue

45 percent Covar Sheep /Fescue

15 percent Reubens Canadian Bluegrass

Provide mixture composed of grass seed and fertilizer in percentages as follows:

Grass seed mixture: 90 lbs. per acre

Fertilizer: 16:16:16 timed release composition, 300 lbs. per acre

All seeding of slopes shall be done in accordance with WSDOT Standard Specifications.

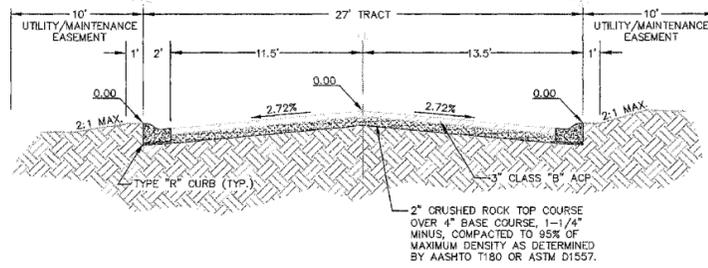
Contractor shall irrigate seeded areas until seed has germinated and has been accepted by Spokane County.

SEEDING SPECIFICATIONS

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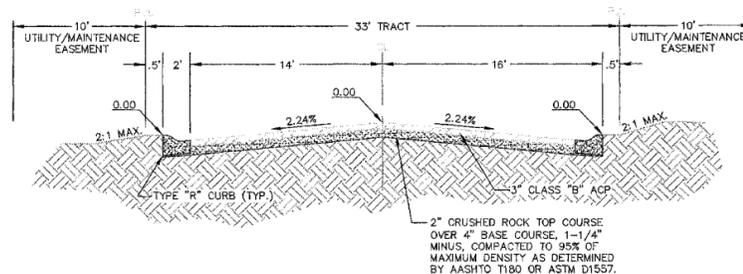


Surveying was provided by Storhaug Engineering.



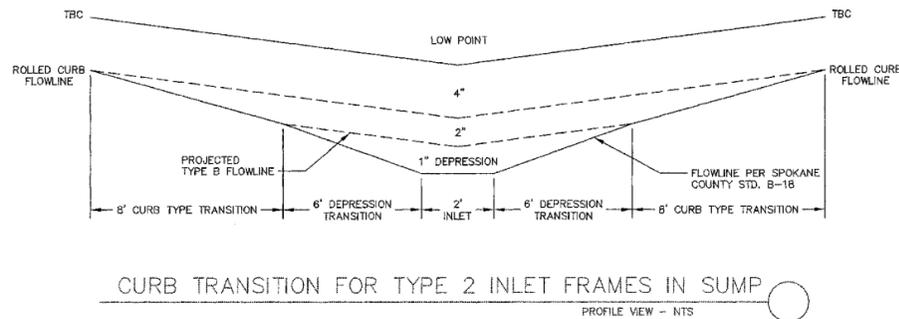
STUB ROAD SOUTH SECTION

NTS



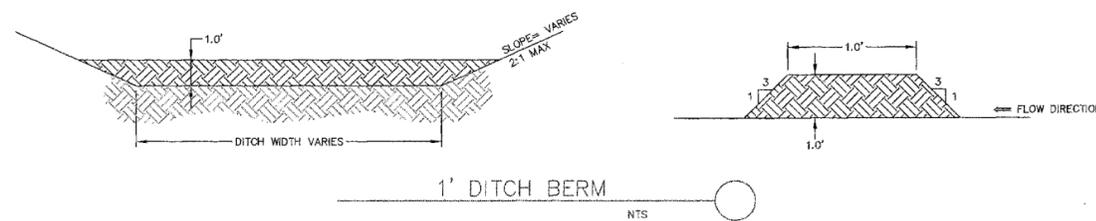
TYPICAL ROAD SECTION

NTS



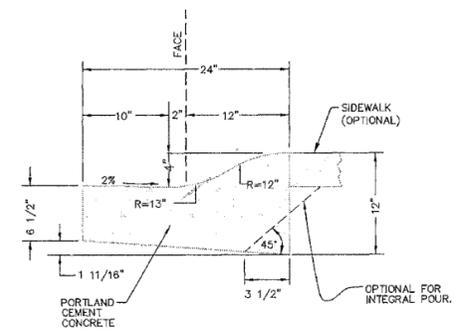
CURB TRANSITION FOR TYPE 2 INLET FRAMES IN SUMP

PROFILE VIEW - NTS



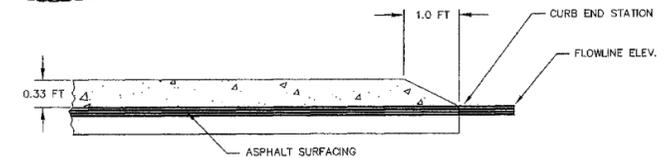
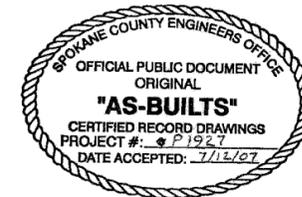
1' DITCH BERM

NTS



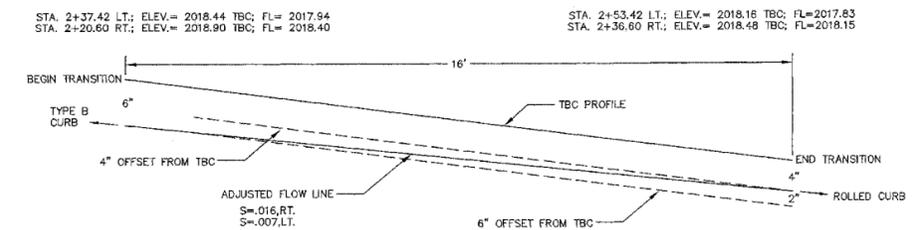
TYPE "R" - ROLLED CURB DETAIL

NTS



CURB NOSEDOWN

NTS



TYPE "B" TO TYPE "R" CURB TRANSITION

PROFILE VIEW - NTS

STORHAUG ENGINEERING
 1000 N. WASHINGTON ST. SPOKANE, WA 99201
 TEL: 467-1111 FAX: 467-1112
 WWW.STORHAUGENGINEERING.COM

DETAIL SHEET
 HAZELWOOD PARK
 SPOKANE COUNTY, WASHINGTON

DATE	10/20/05
DRAWN	KSN/JSC
CHECKED	CM
SCALE	AS SHOWN
PROJECT NUMBER	05028
DRAWING NO.	8 OF 8

DETAIL
 Eng. As Built