

RECORD DRAWING

STREET AND DRAINAGE IMPROVEMENTS ELK RIDGE HEIGHTS - 1ST ADDITION IN THE NORTH HALF OF SECTION 3, TOWNSHIP 24 NORTH, RANGE 44 EAST, W.M., SPOKANE COUNTY, WASHINGTON



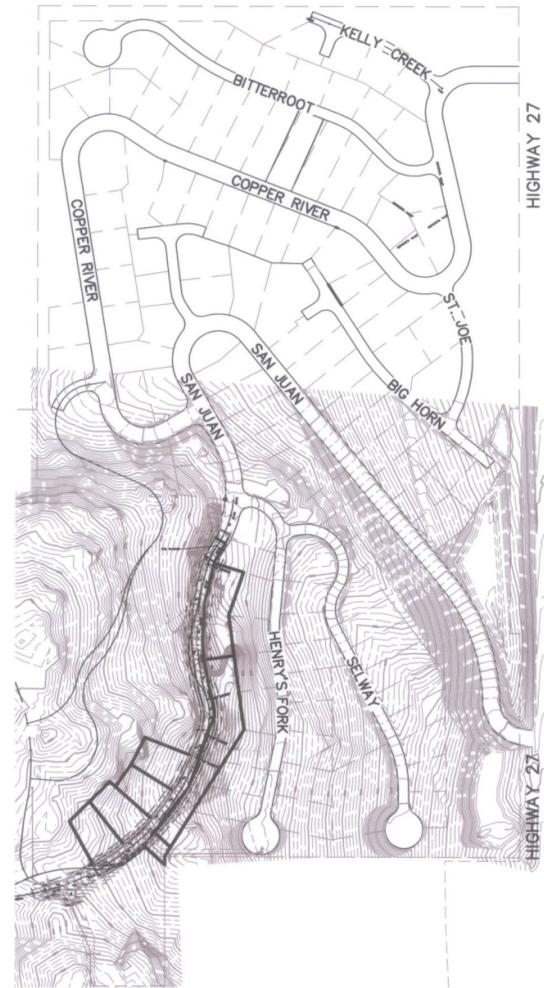
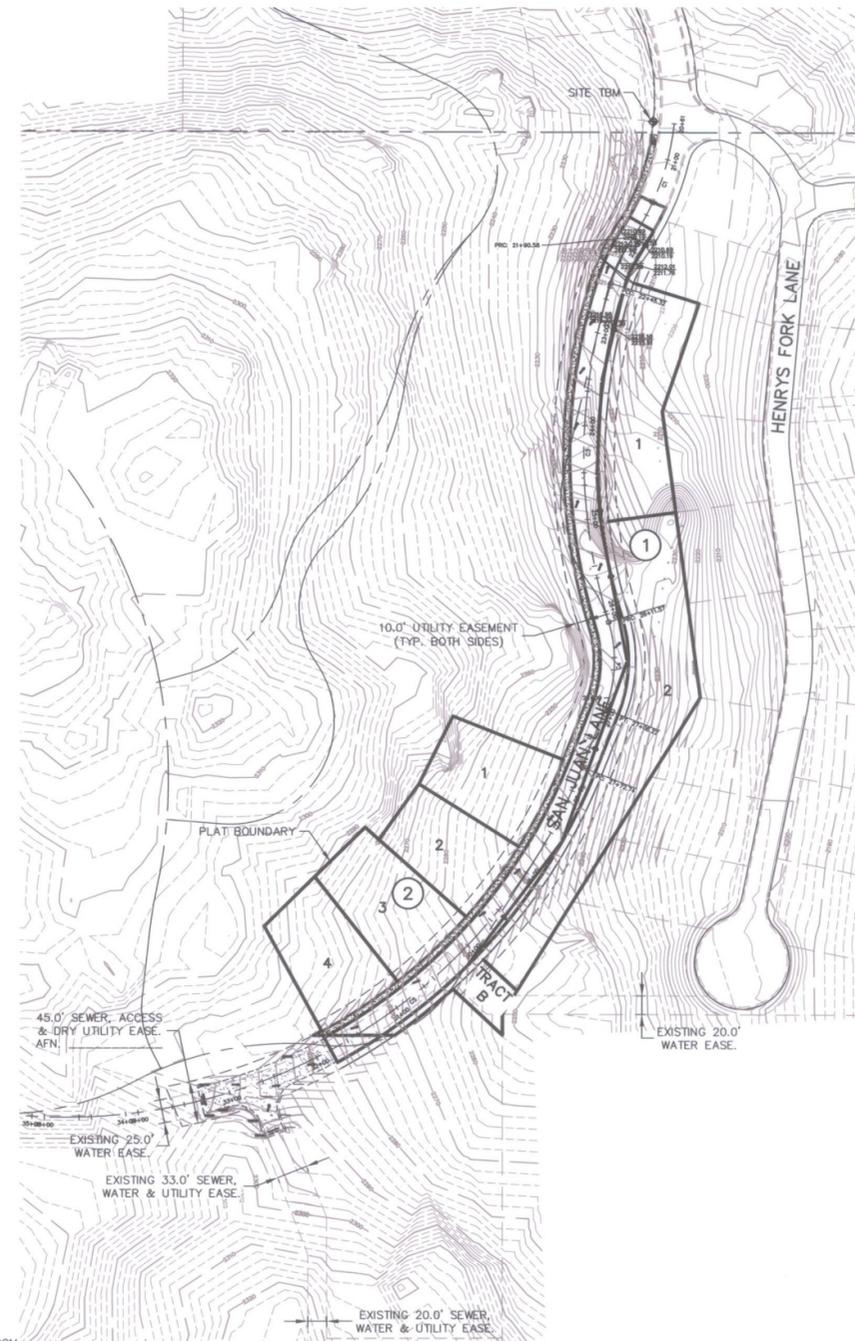
PROJECT AREA

VICINITY MAP
NTS

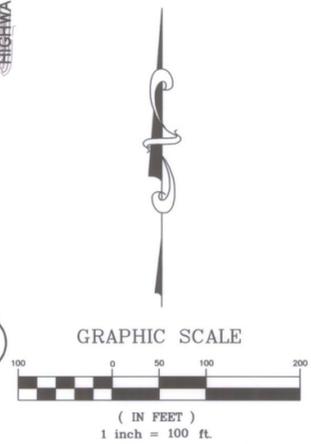
LEGEND

EXISTING FEATURES	
	ASPHALT SURFACING
	CURB
	SIDEWALK OR CONCRETE
	FOUND POINT AS NOTED
	DRYWELL
	STORM MANHOLE
	CATCH BASIN
	GUY WIRE POLE
	POWER POLE
	LIGHT POLE
	TELEPHONE ENCLOSURE
	WATER VALVE
	WATER METER
	FIRE HYDRANT
	SANITARY SEWER MANHOLE
	WATER LINE
	SANITARY SEWER LINE
	STORM DRAIN LINE / CULVERT
	POWER LINE (OHP OR BP)
	TELEPHONE LINE (OHT OR BT)
	GAS LINE
	CONTOURS
	FENCE
	FIBER OPTIC LINE
	PROPERTY LINE

PROPOSED IMPROVEMENTS	
	ASPHALT SURFACING
	CURB
	CONCRETE OR SIDEWALK
	DRYWELL
	STORM MANHOLE
	CONCRETE INLET
	CURB INLET
	POWER POLE
	SIGN
	WATER VALVE
	WATER METER
	FIRE HYDRANT
	WATER SHUTOFF / WATER VAULT
	SANITARY SEWER MANHOLE
	CLEANOUT (CO)
	GAS METER
	8" WA WATER LINE (AS SIZED)
	SLEEVE FOR WATER / SEWER CROSSING
	SANITARY SEWER LINE
	STORM DRAIN LINE / CULVERT
	CONTOURS
	STORM WATER SWALE / POND
	DIRECTION OF SURFACE STORM WATER DRAINAGE
	TOP OF CURB ELEVATION FLOWLINE ELEVATION
	CURB INLET INLET ELEVATION AT FLOWLINE
	FINISHED GRADE ELEVATION



I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.



DEVELOPER _____ DATE _____

ELEVATION DATUM
NAVD88 DATUM ESTABLISHED FROM GPS OBSERVATION ON LOCAL CONTROL POINTS USING WASHINGTON STATE REFERENCE NETWORK.

SITE TBM
FOUND REBAR WITH YPC APPROXIMATELY 22.5 FEET WEST OF CENTERLINE SI OF SAN JUAN LANE AND HENRY'S FORK LANE. ELEV. = 2205.49 (NAVD88)

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No.	DESC.	DATE	BY

storhäug
civil engineering | planning | surveying
landscape architecture

510 east third avenue | spokane, wa | 99202
p. 509.242.1000 | f. 509.242.1001

SHEET TITLE
COVER AND INDEX SHEET

PROJECT TITLE
**STREET AND DRAINAGE IMPROVEMENTS
ELK RIDGE HEIGHTS - 1ST ADDITION
SPOKANE COUNTY, WA**

DATE	05/09/2016
DRAWN	RKJ
CHECKED	JDS
PROJECT NUMBER	13-058
DRAWING NO.	1 OF 5
COVER	

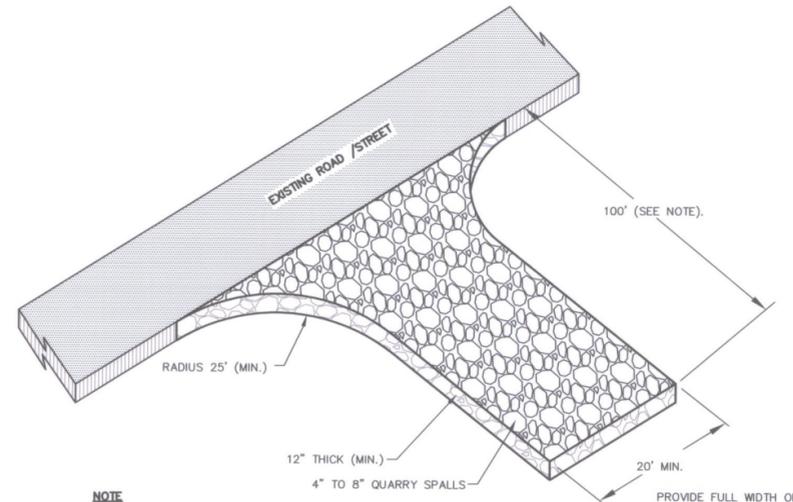
DEFINITION: A TEMPORARY STONE-STABILIZED PAD LOCATED AT POINTS OF VEHICULAR INGRESS AND EGRESS ON A CONSTRUCTION SITE.

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: WHEREVER 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.

RECORD DRAWING



NOTE: 1. AS REQUIRED 100' MINIMUM, EXCEPT MAY BE REDUCED TO 50' MINIMUM FOR SITES WITH LESS THAN 1 ACRE OF EXPOSED SOIL.

STABILIZED CONSTRUCTION ENTRANCE / TIRE WASH (CE)

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).

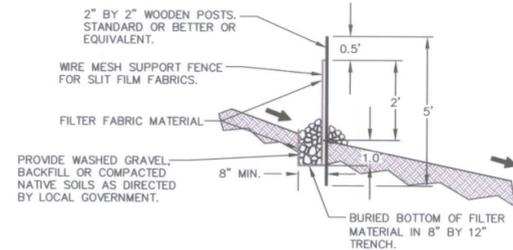
C. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 8 INCHES WIDE AND 12 INCHES DEEP ALONG THE LINE OF POSTS AND UP-SLOPE FROM THE BARRIER. THE TRENCH SHALL BE CONSTRUCTED TO FOLLOW THE CONTOURS.

D. WHEN SLIT FILM FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UP-SLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 1 INCH LONG. THE WIRES OR HOE RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 4 INCHES AND SHALL NOT EXTEND MORE THAN 36 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 36 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 "F" APPLYING. EXTRA CARE SHOULD BE USED WHEN JOINING OR OVERLAPPING THESE STIFFER 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 (FF)

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.

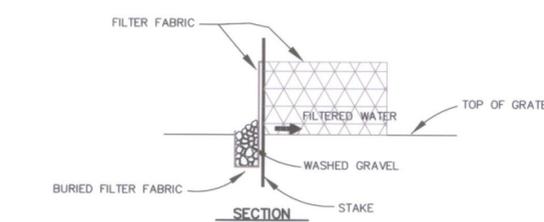
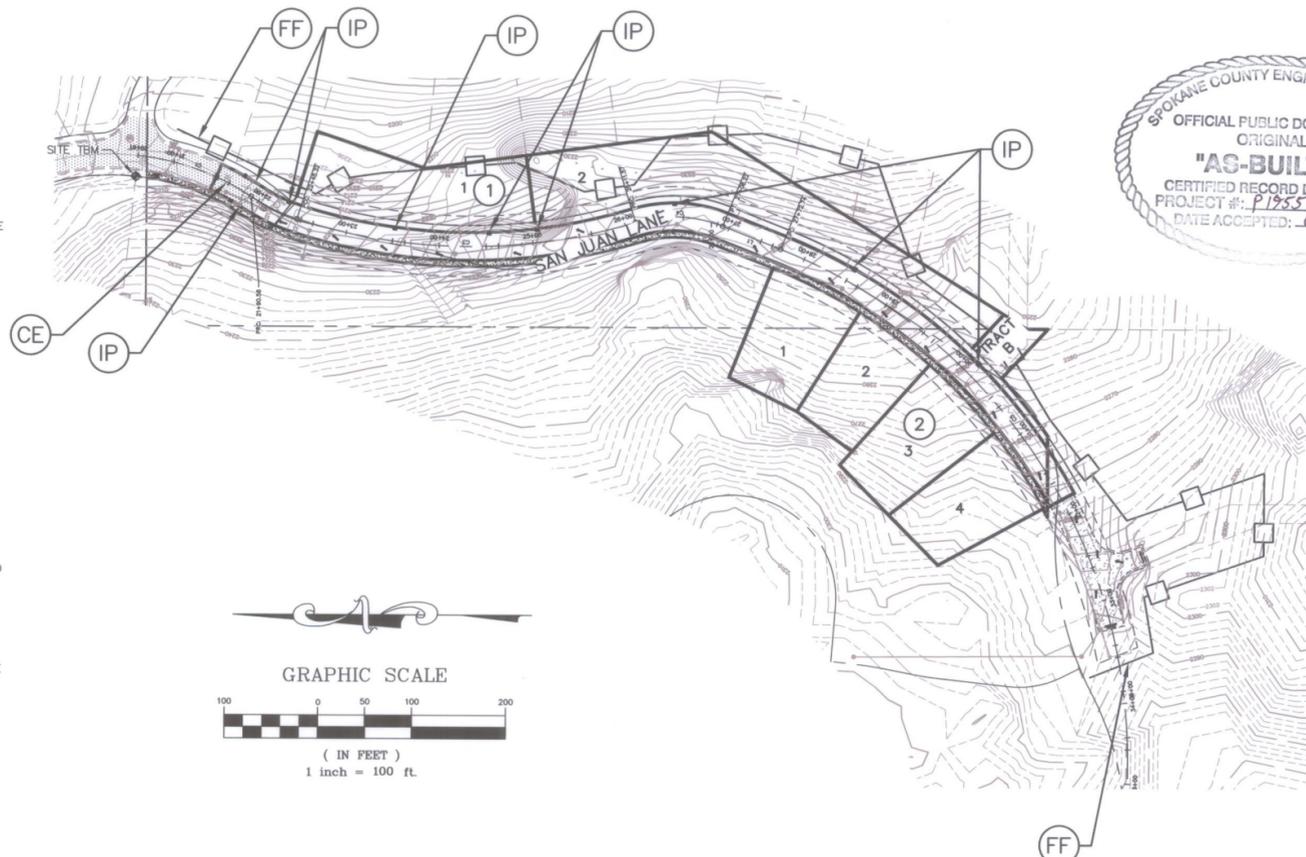
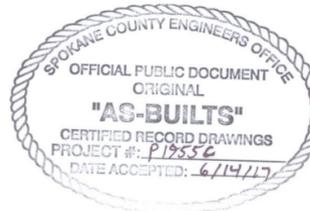
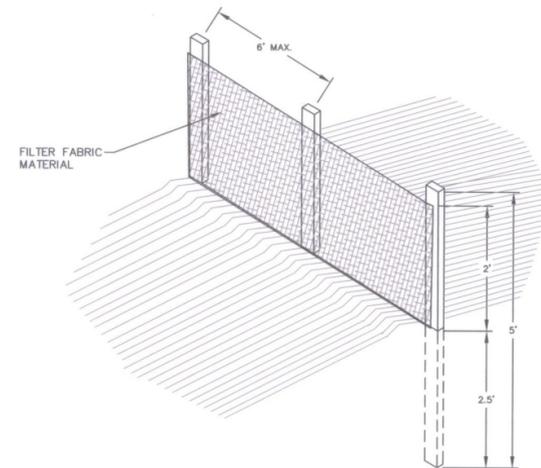
CONDITIONS WHERE PRACTICE APPLIES: FILTER FENCES MUST BE PROVIDED JUST UPSTREAM OF THE POINT(S) OF DISCHARGE OF RUNOFF FROM A SITE, BEFORE THE FLOW BECOMES CONCENTRATED. THEY MAY ALSO BE REQUIRED:

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.

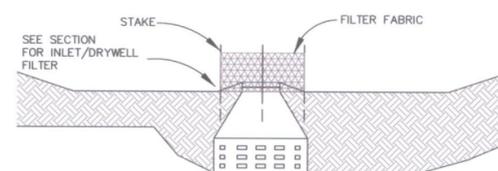
3. CONTRACTOR SHALL COORDINATE WITH DESIGN ENGINEER FOR ACTUAL PLACEMENT LOCATIONS.

MAINTENANCE: THE FILTER FENCE AND INLET PROTECTIONS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD AND SEDIMENT OFF OF THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC CLEANING WHEN SEDIMENT BUILD UP IS SIX INCHES OR ONE-THIRD OF THE FENCE OR INLET PROTECTION'S ORIGINAL HEIGHT.



NOTE: 1. ALL DRYWELLS, INLETS, CATCH BASIN AND ANY OTHER STORM DRAIN FIXTURES WITH GRATED INLETS SHALL BE PROTECTED. 2. PROTECTION SHALL REMAIN IN PLACE UNTIL VEGETATION IS ESTABLISHED. 3. SEDIMENT MUST BE REMOVED WHEN IT REACHES 6" OR 1/3 OF THE HEIGHT OF THE FENCE.

TEMPORARY INLET PROTECTION (IP)



CONTACT PERSON/PROPERTY OWNER/PERMIT APPLICANT

D & J ELK RIDGE HEIGHTS, LLC
JEFF AMISTOSO
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P: 509.991.7568

PROJECT ADDRESS

ELK RIDGE HEIGHTS
PARCEL # 44035.1303
SPOKANE COUNTY, WASHINGTON

PROJECT / SITE DESCRIPTION

THE PROPOSED PROJECT INCLUDES THE ONSITE UTILITY, DRAINAGE, AND STREET IMPROVEMENTS FOR SAN JUAN LANE ASSOCIATED WITH THE PROPOSED ELK RIDGE HEIGHTS 1ST ADDITION. THE SITE IS MOSTLY UNDEVELOPED.

SOIL TYPE

PER THE GEOTECHNICAL REPORT DATED 5-16-05, "THE USDA NATURAL RESOURCES CONSERVATION SERVICE (NRCS) HAS MAPPED THE SOILS ON AND AROUND THE SITE IN THE SOIL SURVEY OF SPOKANE COUNTY AS THE BERNHILL SILT LOAM (BbB), THE CLAYTON SANDY LOAM (CuB), THE SPOKANE COMPLEX (Sae and Ssc), AND THE SPOKANE VEGETATION COMPLEX (Sic and Sie). THE ON-SITE SOILS ENCOUNTERED IN THE TEST PITS APPEAR TO BE CONSISTENT WITH THE SOIL MAPPING."

EXISTING CONDITIONS

THE EXISTING SITE IS MOSTLY UNDEVELOPED AND SLOPES TO THE NORTHEAST. THE SIDE SLOPES ARE MODERATE RANGING FROM 10% TO 30%. THE GEOTECHNICAL REPORT INDICATES THAT THERE IS BEDROCK UNDERNEATH THE EXISTING SOILS WHERE SOME REFUSAL DEPTHS WERE FOUND TO BE 4 TO 7 FEET.

ESC STANDARD NOTES

- 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 CURRENT 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 NONINERT 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 DEGREASING 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 REPLACED 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.
- BMPs SHALL BE IN ACCORDANCE WITH CHAPTER 7 OF THE STORMWATER MANAGEMENT MANUAL FOR EASTERN WASHINGTON.

I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.



DEVELOPER DATE

NOTE: REFER TO COVER & INDEX SHEET FOR VICINITY MAP. CALL BEFORE YOU DIG 811

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EROSION SEDIMENT CONTROL PLAN
ELK RIDGE HEIGHTS - 1ST ADDITION
SPOKANE COUNTY, WA

DATE	05/09/2016
DRAWN	RKJ
CHECKED	JDS
PROJECT NUMBER	13-058
DRAWING NO.	2 OF 5
ESC	

ELEVATION DATUM
NAVD88 DATUM ESTABLISHED FROM GPS OBSERVATION ON LOCAL CONTROL POINTS USING WASHINGTON STATE REFERENCE NETWORK.

SITE TBM
FOUND REBAR WITH YPC APPROXIMATELY 22.5 FEET WEST OF CENTERLINE SI OF SAN JUAN LANE AND HENRY'S FORK LANE. ELEV. = 2205.49 (NAVD88)

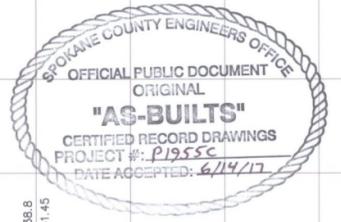
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1	ADJUSTED STORM		VAC
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510 east third avenue | spokane, wa | 99202
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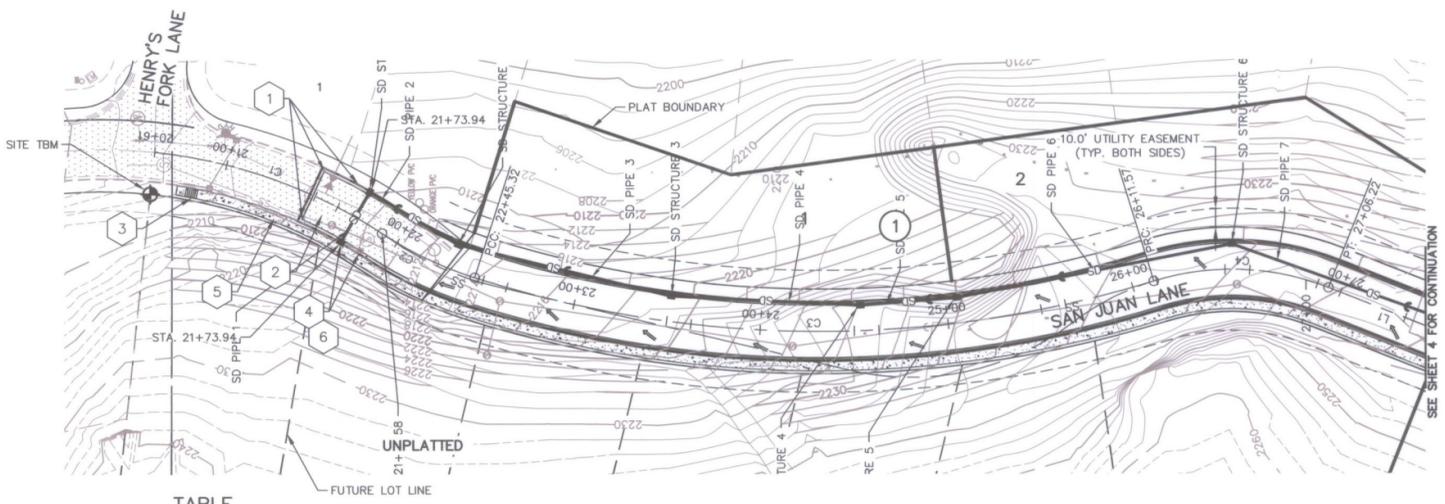
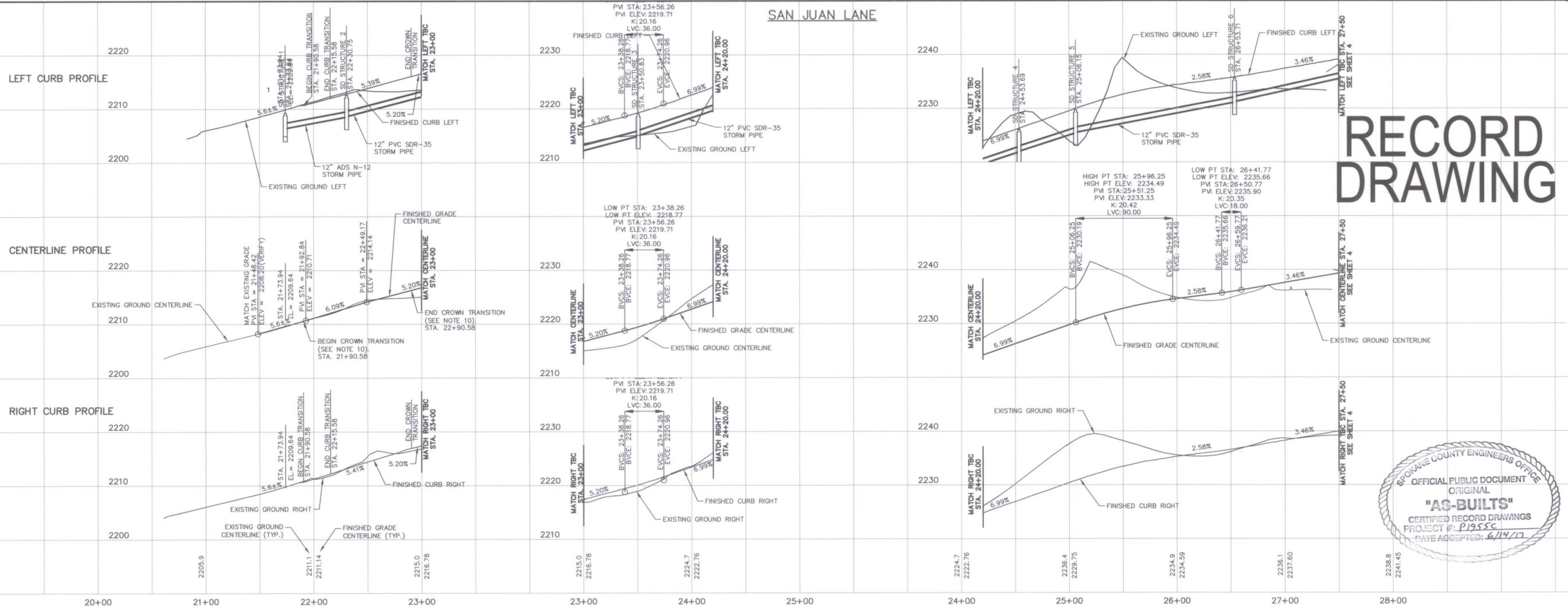
RECORD DRAWING



SHEET TITLE
SEAL

PROJECT TITLE
SAN JUAN LANE PLAN AND PROFILE
STA. 21+00 TO STA. 27+50
ELK RIDGE HEIGHTS - 1ST ADDITION
SPOKANE COUNTY, WA

DATE	05/09/2016
DRAWN	RKJ
CHECKED	JDS
PROJECT NUMBER	13-058
DRAWING NO.	3 OF 5
DEVELOPER	DATE



- TABLE**
- SAWCUT, REMOVE AND REPLACE EXISTING ASPHALT, CURB, AND SIDEWALK AS NECESSARY TO INSTALL PROPOSED IMPROVEMENTS.
 - SAWCUT, REMOVE AND REPLACE FOR UTILITY CONNECTIONS PER NORTHWEST REGIONAL PAVEMENT PATCH POLICY. SEE UTILITY PLANS FOR MORE INFORMATION. STA. 21+48.7± TO 21+90.6±
 - CURB RAMP PER 2010 SPOKANE COUNTY STD. PLAN A-5.
 - RELOCATE AND ADJUST EXISTING CATCH BASIN AND 12" STORM PIPE AS SHOWN. CONNECT 12" ADS N-12 STORM PIPE TO RELOCATED EXISTING CATCH BASIN. ADJUST RIM ELEVATION AS NECESSARY.
RIM (ADJUSTED)= 2209.17
FL (NEW LOCATION)= 2209.25
IE.(EXISTING TO NORTH)= 2205.13
IE.(PROPOSED TO SE)= 2205.23
 - CONTIGUOUS SIDEWALK PER 2001 SPOKANE COUNTY STD. PLAN A-1. BEGIN STA. 20+75.76 WIDTH= 5.0'
 - DIG UP EXISTING STORM DRAINAGE PIPING AS NECESSARY TO CONNECT EXISTING PIPE INTO PROPOSED CATCH BASIN LOCATION.

CENTERLINE LINE TABLE

LINE	LENGTH	DIRECTION
L1	66.52	S21° 36' 00.35"W

CENTERLINE CURVE TABLE

CURVE	RADIUS	LENGTH	DELTA	TAN	CHORD L	BEARING
C1	270.00	129.50	027°28'48"	66.02	128.26	S33°31'24"W
C2	200.00	54.75	015°41'02"	27.55	54.58	S17°50'22"W
C3	600.00	366.25	034°58'26"	189.03	360.59	S17°08'04"E
C4	140.00	94.65	038°44'04"	49.21	92.85	S21°36'00"W

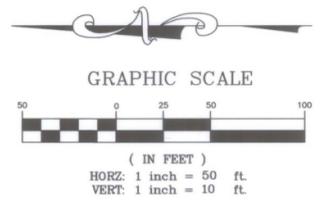
STORM STRUCTURE TABLE

STRUCTURE	ELEVATIONS	DETAILS
SD STRUCTURE 1	FL= 2209.25 RIM.= FG IE.= 2206.30 (NW) IE.= 2206.40 (SW)	WSDOT INLET TYPE 2
SD STRUCTURE 2	FL= 2212.56 RIM.= 2212.48 IE.= 2208.52 (NE) IE.= 2208.62 (S)	CATCH BASIN TYPE 1 GRATE TYPE 1
SD STRUCTURE 3	FL= 2219.02 RIM.= 2218.94 IE.= 2214.90 (N) IE.= 2215.00 (S)	CATCH BASIN TYPE 1 GRATE TYPE 1
SD STRUCTURE 4	FL= 2226.07 RIM.= 2225.99 IE.= 2222.00 (S) IE.= 2221.90 (N)	CATCH BASIN TYPE 1 GRATE TYPE 1
SD STRUCTURE 5	FL= 2229.74 RIM.= 2229.66 IE.= 2225.40 (N) IE.= 2225.50 (S)	CATCH BASIN TYPE 1 GRATE TYPE 1
SD STRUCTURE 6	FL= 2235.57 RIM.= 2235.49 IE.= 2231.10 (N) IE.= 2231.20 (S)	CATCH BASIN TYPE 1 GRATE TYPE 1

STORM PIPE TABLE

NAME	DETAILS
SD PIPE 1	12" PVC L= 30.7 S.= 0.0347 FT/FT
SD PIPE 2	12" PVC L= 54.9 S.= 0.0386 FT/FT
SD PIPE 3	12" PVC L= 116.5 S.= 0.0539 FT/FT
SD PIPE 4	12" PVC L= 100.4 S.= 0.0687 FT/FT
SD PIPE 5	12" PVC L= 51.3 S.= 0.0663 FT/FT
SD PIPE 6	12" PVC L= 148.9 S.= 0.0376 FT/FT
SD PIPE 7	12" PVC L= 203.9 S.= 0.0431 FT/FT

- NOTES**
- SEE CONSTRUCTION SPECIFICATIONS SHOWN ON DETAIL SHEET.
 - ALL CURB RETURNS SHALL BE 30' RADIUS AT BACK OF CURB UNLESS OTHERWISE SHOWN.
 - ALL CURB AND OFFSET DATA IS REFERENCED TO TOP BACK OF CURB, UNLESS OTHERWISE NOTED.
 - 2.0' (MIN.) OF COVER SHALL BE MAINTAINED OVER ALL STORM DRAIN PIPES.
 - CURB INLETS WITH GRATES SHALL BE CONSTRUCTED 1" LOWER THAN THE FLOW LINE OF THE CURB PER SPOKANE COUNTY STANDARD B-18. ASPHALT AND CURB TO HAVE SMOOTH TAPER INTO CURB INLETS.
 - W.S.D.O.T. TYPE 2 INLETS SHALL BE PLACED SO THAT THE LONGER SIDE OF THE STRUCTURE IS PERPENDICULAR TO THE CURB.
 - CONTRACTOR SHALL VERIFY UTILITY SERVICE ELEVATIONS AT ALL CROSSINGS PRIOR TO CONSTRUCTION OF ROAD AND DRAINAGE IMPROVEMENTS.
 - ALL STATIONING REFERENCES SAN JUAN LANE CENTERLINE ALIGNMENT.
 - THE TYPE OF STORM DRAIN STRUCTURE IS LISTED IN THE DETAILS OF THE STRUCTURE TABLES.
 - CATCH BASIN TYPE 1 REPRESENTS A SPOKANE COUNTY STANDARD DRAWING CATCH BASIN TYPE 1 (STD. B-4).
 - WSDOT INLET TYPE 2 REPRESENTS A WSDOT STANDARD DRAWING INLET TYPE 2 (STD. B-35.40-00) WITH FRAME AND DUAL VANED GRATE (STD. B-40.40-01). WSDOT INLET SHALL BE ROTATED SO "LONG SIDE IS PERPENDICULAR TO CURB." RIM TO MATCH ROAD CROSS SLOPE.
 - TYPE 1 GRATE REPRESENTS A SPOKANE COUNTY METAL GRATE TYPE 1 PER SPOKANE COUNTY DRAWING B-12.
 - TYPE 3 GRATE REPRESENTS A SPOKANE COUNTY METAL GRATE TYPE 3 PER SPOKANE COUNTY DRAWING B-14.
 - TYPE 1 FRAMES SHALL BE USED ON ALL TYPE 1 CATCH BASINS AND REPRESENTS A SPOKANE COUNTY METAL FRAME TYPE 1 PER SPOKANE COUNTY DRAWING B-10.
 - TRANSITION FROM CENTER CROWN STREET SECTION TO CURB CROWN STREET SECTION. SEE DETAIL SHEETS FOR MORE INFORMATION.



I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.



6-17

ELEVATION DATUM
NAVD88 DATUM ESTABLISHED FROM GPS OBSERVATION ON LOCAL CONTROL POINTS USING WASHINGTON STATE REFERENCE NETWORK.

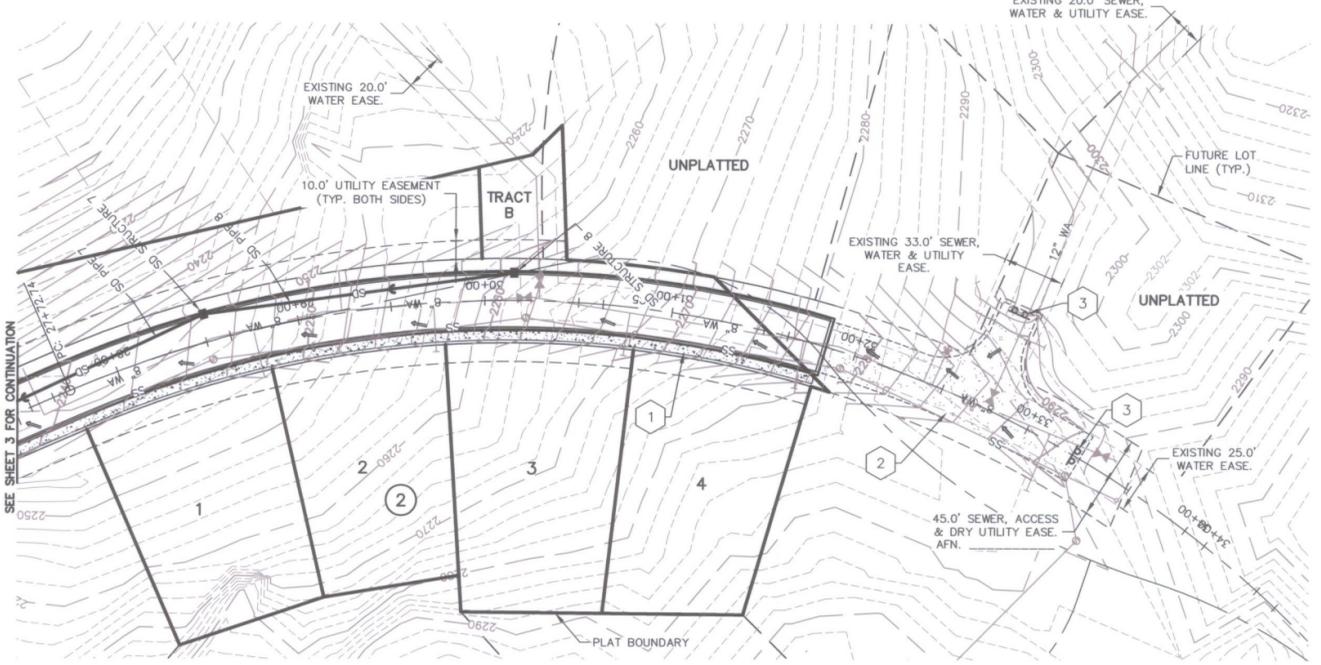
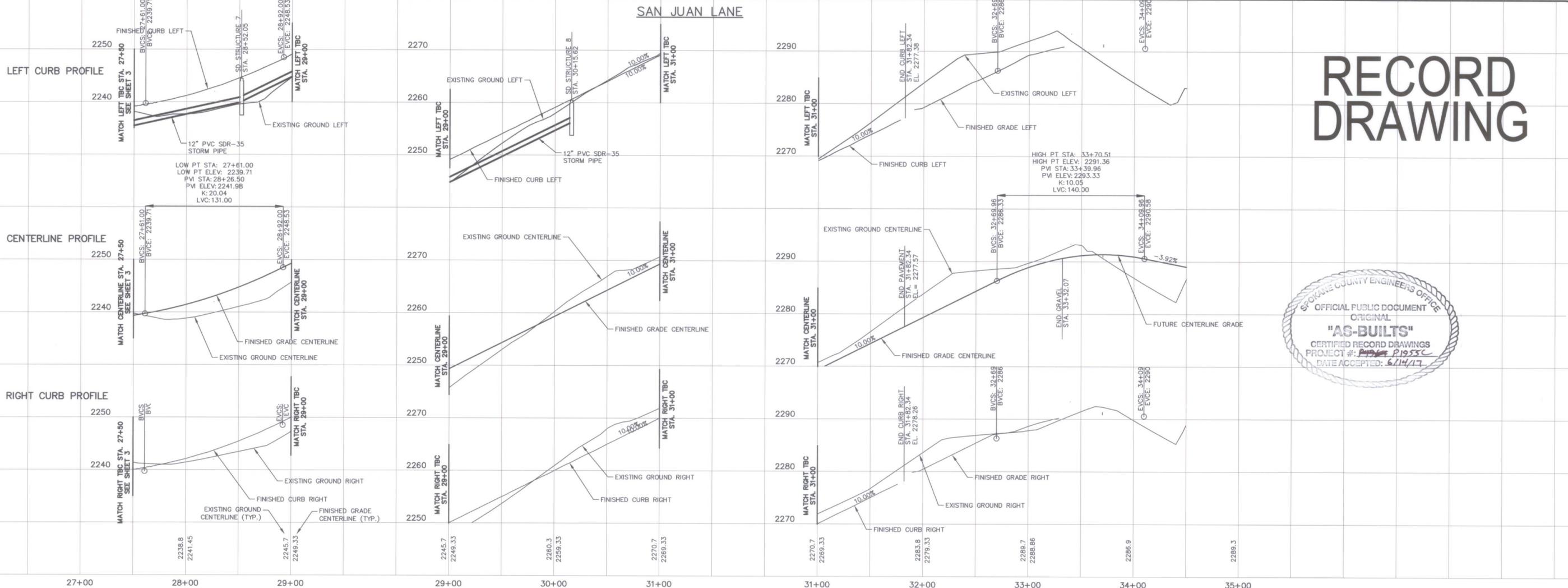
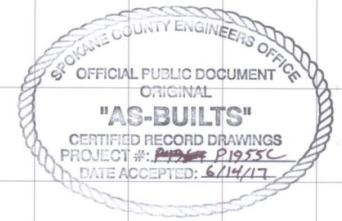
SITE TBM
FOUND REBAR WITH YPC APPROXIMATELY 22.5 FEET WEST OF CENTERLINE SI OF SAN JUAN LANE AND HENRY'S FORK LANE. ELEV.= 2205.49 (NAVD88)

san_juan-1
asbuilt_street(2).dwg

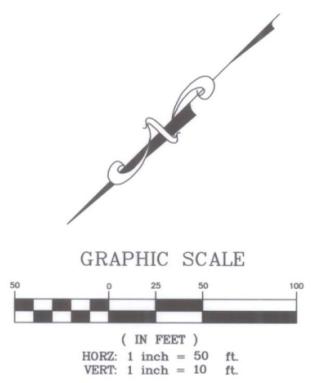
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No.	DESC.	DATE	BY

RECORD DRAWING

storhäug
 planning
 civil engineering
 landscape architecture
 510 east third avenue | spokane, wa | 99202
 p 509.242.1000 | f 509.242.1001



CURVE	RADIUS	LENGTH	DELTA	TAN	CHORD L	BEARING
C5	590.00	917.84	089°07'58"	581.14	828.05	N69°16'02"W



STRUCTURE	ELEVATIONS	DETAILS
SD STRUCTURE 7	FL= 2244.50 RIM= FG IE.= 2239.99 (N) IE.= 2240.09 (SW)	WSDOT INLET TYPE 2
SD STRUCTURE 8	FL= 2260.46 RIM= FG IE.= 2256.29 (NE)	WSDOT INLET TYPE 2

NAME	DETAILS
SD PIPE 7	12" PVC L= 203.9 S.= 0.0431 FT/FT
SD PIPE 8	12" PVC L= 167.1 S.= 0.0969 FT/FT

* PIPES AS SHOWN IN TABLE ARE PVC SDR-35.

NOTES

- SEE CONSTRUCTION SPECIFICATIONS SHOWN ON DETAIL SHEET.
- ALL CURB RETURNS SHALL BE 30' RADIUS AT BACK OF CURB UNLESS OTHERWISE SHOWN.
- ALL CURB AND OFFSET DATA IS REFERENCED TO TOP BACK OF CURB, UNLESS OTHERWISE NOTED.
- 2.0' (MIN.) OF COVER SHALL BE MAINTAINED OVER ALL STORM DRAIN PIPES.
- CURB INLETS WITH GRATES SHALL BE CONSTRUCTED 1" LOWER THAN THE FLOW LINE OF THE CURB PER SPOKANE COUNTY STANDARD B-18. ASPHALT AND CURB TO HAVE SMOOTH TAPER INTO CURB INLETS.
- W.S.D.O.T. TYPE 2 INLETS SHALL BE PLACED SO THAT THE LONGER SIDE OF THE STRUCTURE IS PERPENDICULAR TO THE CURB.
- CONTRACTOR SHALL VERIFY UTILITY SERVICE ELEVATIONS AT ALL CROSSINGS PRIOR TO CONSTRUCTION OF ROAD AND DRAINAGE IMPROVEMENTS.
- ALL STATIONING REFERENCES SAN JUAN LANE CENTERLINE ALIGNMENT.

I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.



6-1-17

ELEVATION DATUM
 NAVD88 DATUM ESTABLISHED FROM GPS OBSERVATION ON LOCAL CONTROL POINTS USING WASHINGTON STATE REFERENCE NETWORK.

SITE TBM
 FOUND REBAR WITH YPC APPROXIMATELY 22.5 FEET WEST OF CENTERLINE S1 OF SAN JUAN LANE AND HENRY'S FORK LANE. ELEV.= 2205.49 (NAVD88)

1	CONTIGUOUS SIDEWALK PER 2001 SPOKANE COUNTY STD. PLAN A-1. WIDTH= 5.0'
2	GRAVEL ACCESS. SEE DETAIL SHEET FOR MORE INFORMATION.
3	TYPE 3 BARRICADE PER WSDOT STD. PLAN K-80.20-00.

DEVELOPER _____ DATE _____

CALL BEFORE YOU DIG 811

SAN JUAN LANE PLAN AND PROFILE
 STA. 27+50 TO STA. 34+50
 ELK RIDGE HEIGHTS - 1ST ADDITION
 SPOKANE COUNTY, WA

DATE	05/09/2016
DRAWN	RKJ
CHECKED	JDS
PROJECT NUMBER	13-058
DRAWING NO.	
4 OF 5	
STREET	

- All work and materials shall be in conformance with the local jurisdiction road standards Spokane County Standards for Road and Sewer Construction, 2001 as amended in 2003.
- Prior to site construction, the Contractor is responsible for locating underground utilities. Call the underground utility location service at 1-800-424-5555 before you dig.
- Locations of existing utilities shown in the plans are approximate. The Contractor shall be responsible for locating all underground utilities. Any conflicting utilities shall be relocated prior to construction of road and drainage facilities.
- The Contractor is required to have a complete set of the accepted 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.
- The Contractor should take precautions to protect the infiltration capacity of stormwater facilities (e.g., line the facility with filter fabric, over-excavate upon completion of the infrastructure, etc.)
- For any curb grades less than 0.8% (0.008 ft/ft), a Professional Land Surveyor currently licensed in the State of Washington shall verify that the curb forms are at the grades noted on the accepted plans, prior to placement of concrete. The Contractor is responsible for arranging and coordinating work with the Surveyor.
- The Contractor shall employ a Professional Land Surveyor currently licensed in the State of Washington to verify that the cross-gutter shall be constructed prior to paving, and the pavement shall then match the edge of concrete gutter.
- For construction of drywells, install filter fabric (Amoco 4545 or approved equivalent) between the washed drain rock and the native soils.
- Bio-infiltration ponds/swales shall have a maximum treatment design depth (from pond/swale bottom to elevation of drywell grate or first overflow/outflow mechanism) of 6 inches. Either organic matter content or Cation Exchange Capacity (CEC) testing shall be completed in order to substantiate the treatment soil composition. The tests shall be performed on composite samples taken from the treatment soil layer from the constructed pond bottom. A composite sample consists of well-mixed soil obtained from at least four cores to a depth of at least 6 inches, randomly distributed over the pond bottom test area. Stockpile samples from on-site or a material supplier can be tested for informational purposes to determine initial suitability and possible soil amendments, but will not be accepted in-lieu of in-place testing. A minimum of one test shall be performed for each bio-infiltration pond/swale 1,500 square feet or less, with one additional test for each additional 2,000 square feet of pond/swale bottom, or fraction thereof. "One test" is equal to four core samples taken as described above. Testing results shall be submitted as part of the Construction Certification Submittal required for release of surety posted on project.
- Concrete aprons are required at the inlet into any swale or pond. The finish grade of the swale/pond side slope, where the concrete inlet apron ends, shall be a minimum of 2 inches below the finished elevation of the concrete curb apron extension. The intention is to allow stormwater runoff to enter the swale/pond unobstructed, without backing up into the street and gutter due to sod overgrowth at the inlet.
- Unlined pond and bioinfiltration swale bottoms are expected to infiltrate via the pond floor, and therefore, shall not be heavily compacted; equipment traffic shall be minimized on the pond bottoms. The facility subgrade shall be a medium- to well draining material, with a minimum thickness of 48 inches and a minimum infiltration rate of 0.15 in/hr. The facility shall drain within 72 hours of a storm event. If the pond also serves as a water quality treatment facility, the treatment zone (sod and 6 inches of treatment soil) shall be a medium- to well-draining material, with a minimum infiltration rate of 0.25-0.50 in/hr.; silty loam or loamy soils are presumed to have an infiltration rate that falls within this range. Scarify the finish grade of the pond bottom prior to hydroseeding/sodding. Testing that verifies subgrade minimum infiltration rate is required by the local jurisdiction prior to construction certification to ensure adequate drainage. Infiltrative testing of the treatment zone is only required if soils other than silty loam or loamy soils are proposed.
- If, during final inspection, it is found that the constructed pond or swale does not conform to the accepted design, the system shall be reconstructed so that it does comply.

STANDARD NOTES FOR ROAD AND DRAINAGE

- Coordinate with Spokane County and Design Engineer prior to construction. The contractor shall obtain all applicable permits prior to beginning construction and coordinate with the governing regulatory agencies regarding construction and inspection requirements.
- 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.
- Irrigation system for storm water management ponds shall be provided by Contractor/Developer. Irrigation system shall be design/build.
- Storm drain pipes shall be Polyethylene (CPEP) smooth wall pipe per Advanced Drainage Systems (ADS) N-12, constructed per WSDOT/APWA standard specifications, unless otherwise noted.
- The contractor shall be responsible for all traffic control in accordance with M.U.T.C.D. and Spokane County Standards prior to disruption of any traffic. No work shall commence until all approved traffic control is in place and the appropriate agency notification has taken place.
- Where new asphalt joins existing, the existing asphalt shall be cut to a neat vertical edge and tacked with asphalt emulsion type CSS-1 in accordance with the standard specifications. The new asphalt shall be feathered back over existing to provide for a seal at the saw cut location and the joint sealed with grade AR-4000W paving asphalt.
- Coordinate with the governing regulatory agency regarding construction/installation of street name and regulatory signs.
- Maintain a minimum of 10 feet horizontal clearance between water pipe and pipe carrying non-potable water. At crossings, there shall be a minimum vertical clearance of 18 inches between water pipe (above) and pipe carrying non-potable water (below). Installations for utilities other than potable water may be installed at a clearance less than those stated above if the non-potable line is sleeved per the governing regulatory agency specifications.
- Unless elevations and/or contours are otherwise shown, new finish grade surfaces shall be placed to allow for positive drainage to curb, gutter, or other runoff collection devices. Maintain positive drainage away from buildings.

GENERAL NOTES

ALL DISTURBED AREAS SHALL BE HYDROSEED PER THE SEEDING SPECIFICATIONS. COORDINATE WITH THE LANDSCAPE PLAN.

PROVIDE FRESH, CLEAN NEW CROP SEED COMPLYING WITH TOLERANCE FOR PURITY AND GERMINATION ESTABLISHED BY OFFICIAL SEED ANALYSTS OF NORTH AMERICA. PROVIDE SEED MIXTURE COMPOSED OF GRASS SPECIES AND PERCENTAGES AS FOLLOWS:

20 PERCENT ELKA 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

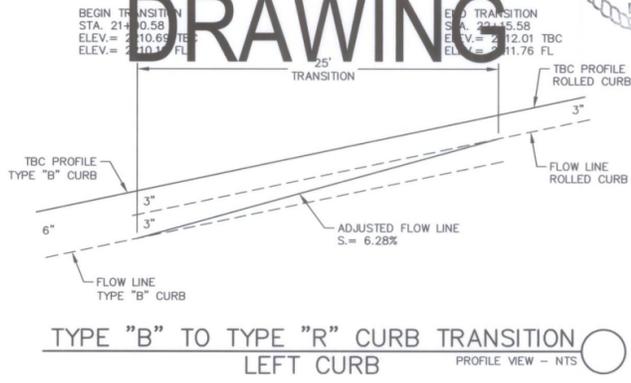
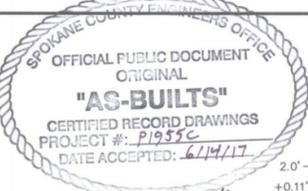
ALL SEEDING OF SLOPES SHALL BE DONE IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATIONS.

CONTRACTOR SHALL IRRIGATE SEEDING AREAS UNTIL SEED HAS GERMINATED AND HAS BEEN ACCEPTED BY SPOKANE COUNTY.

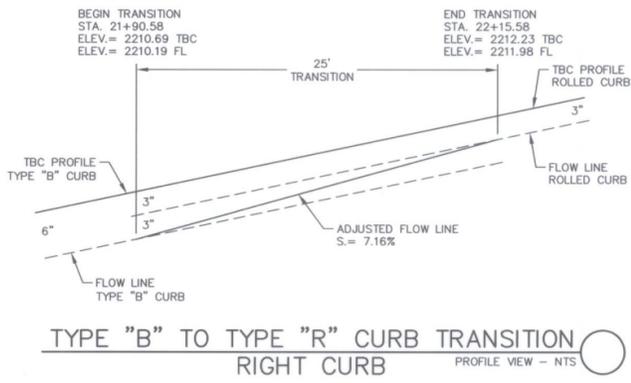
SEEDING SPECIFICATIONS

ALL DISTURBED AREAS SHALL BE HYDROSEED PER THE SEEDING SPECIFICATIONS. COORDINATE WITH THE LANDSCAPE PLAN.

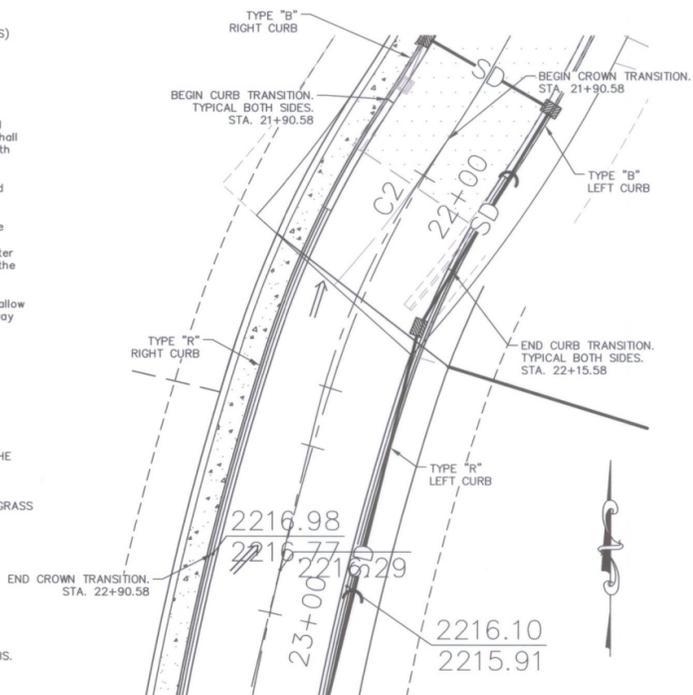
RECORD DRAWING



TYPE "B" TO TYPE "R" CURB TRANSITION LEFT CURB PROFILE VIEW - NTS



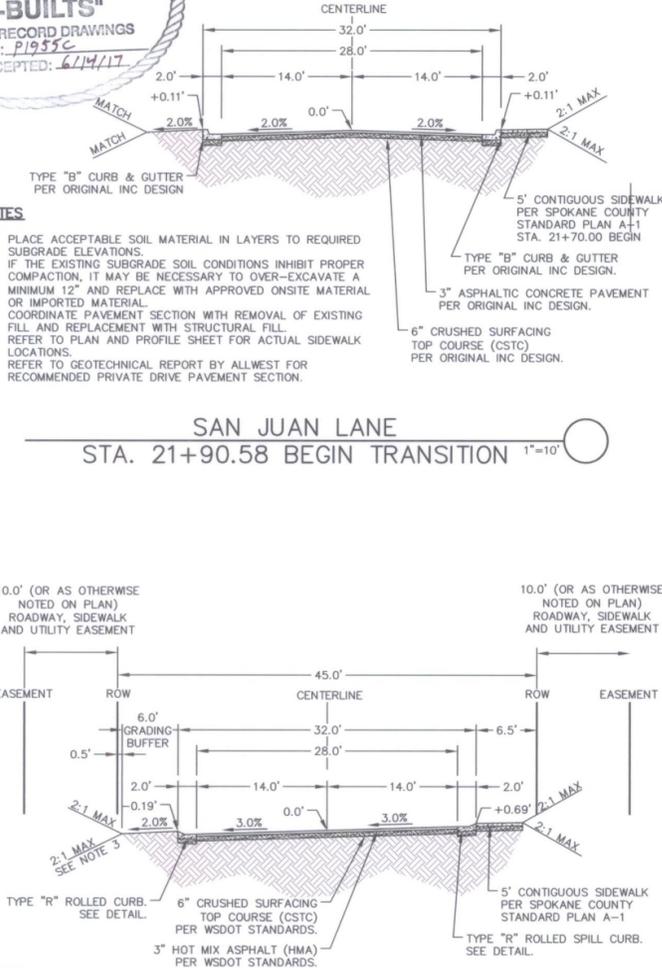
TYPE "B" TO TYPE "R" CURB TRANSITION RIGHT CURB PROFILE VIEW - NTS



CENTER CROWN TO CURB CROWN 100' TRANSITION - SAN JUAN LN. 1"=20'

NOTES

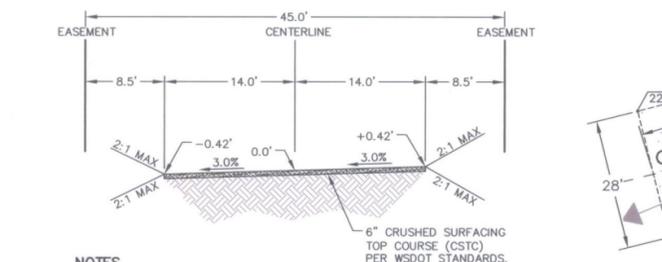
- PLACE ACCEPTABLE SOIL MATERIAL IN LAYERS TO REQUIRED SUBGRADE ELEVATIONS.
- IF THE EXISTING SUBGRADE SOIL CONDITIONS INHIBIT PROPER COMPACTION, IT MAY BE NECESSARY TO OVER-EXCAVATE A MINIMUM 12" AND REPLACE WITH APPROVED ONSITE MATERIAL OR IMPORTED MATERIAL.
- COORDINATE PAVEMENT SECTION WITH REMOVAL OF EXISTING FILL AND REPLACEMENT WITH STRUCTURAL FILL.
- REFER TO PLAN AND PROFILE SHEET FOR ACTUAL SIDEWALK LOCATIONS.
- REFER TO GEOTECHNICAL REPORT BY ALLWEST FOR RECOMMENDED PRIVATE DRIVE PAVEMENT SECTION.



SAN JUAN LANE STA. 21+90.58 BEGIN TRANSITION 1"=10'

NOTES

- PLACE ACCEPTABLE SOIL MATERIAL IN LAYERS TO REQUIRED SUBGRADE ELEVATIONS.
- SIDE SLOPES TO BE 5:1 TO 3:1 WHERE POSSIBLE.
- IF THE EXISTING SUBGRADE SOIL CONDITIONS INHIBIT PROPER COMPACTION, IT MAY BE NECESSARY TO OVER-EXCAVATE A MINIMUM 12" AND REPLACE WITH APPROVED ONSITE MATERIAL OR IMPORTED MATERIAL.
- COORDINATE PAVEMENT SECTION WITH REMOVAL OF EXISTING FILL AND REPLACEMENT WITH STRUCTURAL FILL.
- REFER TO PLAN AND PROFILE SHEET FOR ACTUAL SIDEWALK LOCATIONS.
- REFER TO GEOTECHNICAL REPORT BY ALLWEST FOR RECOMMENDED PRIVATE DRIVE PAVEMENT SECTION.
- USE THIS STREET SECTION THROUGH STREET TRANSITION, STA. 21+90.58 TO 22+90.58, CURB TRANSITIONS FROM TYPE "B" CURB TO TYPE "R" CURB AND ROAD SECTION TRANSITIONS FROM CENTER CROWN TO CURB CROWN.



SAN JUAN LANE STA. 22+90.58 TO 31+82.34 1"=10'

NOTES

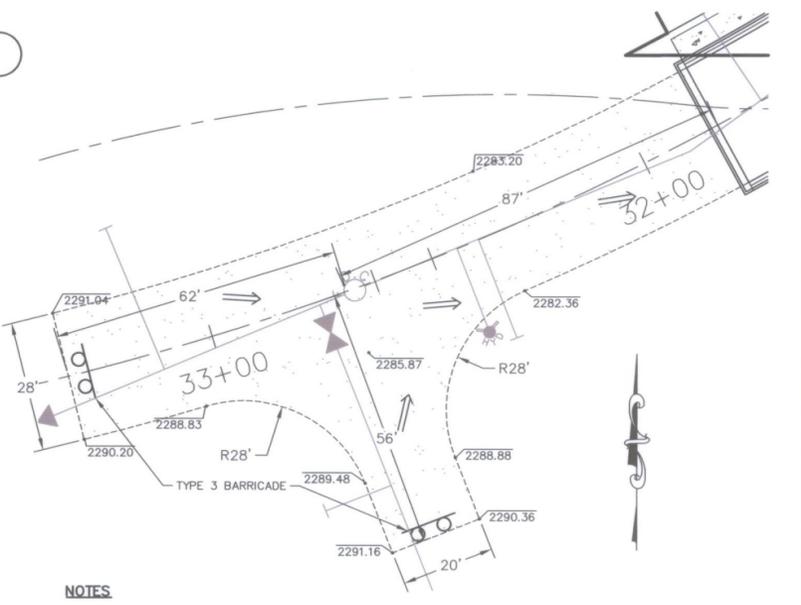
- PLACE ACCEPTABLE SOIL MATERIAL IN LAYERS TO REQUIRED SUBGRADE ELEVATIONS.
- SIDE SLOPES TO BE 5:1 TO 3:1 WHERE POSSIBLE.
- IF THE EXISTING SUBGRADE SOIL CONDITIONS INHIBIT PROPER COMPACTION, IT MAY BE NECESSARY TO OVER-EXCAVATE A MINIMUM 12" AND REPLACE WITH APPROVED ONSITE MATERIAL OR IMPORTED MATERIAL.
- COORDINATE PAVEMENT SECTION WITH REMOVAL OF EXISTING FILL AND REPLACEMENT WITH STRUCTURAL FILL.
- REFER TO PLAN AND PROFILE SHEET FOR ACTUAL SIDEWALK LOCATIONS.
- REFER TO GEOTECHNICAL REPORT BY ALLWEST FOR RECOMMENDED PRIVATE DRIVE PAVEMENT SECTION AND GEOTEXTILE FABRIC.

SAN JUAN LANE STA. 31+82.34 TO 33+32.07 1"=10'



I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.

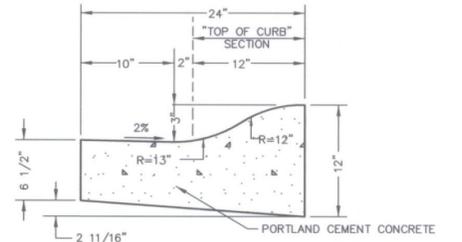
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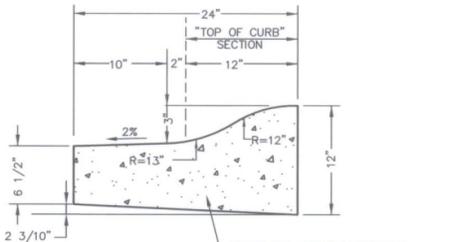
SAN JUAN LN. GRAVEL TURN-AROUND 1"=20'

NOTES

- SEE SAN JUAN LANE (STA. 31+82.34 TO 33+32.07) SECTION DETAIL ON THIS SHEET FOR MORE INFORMATION.



ROLLED CURB DETAIL NTS



ROLLED CURB SPILL DETAIL NTS

NOTES

- PORTLAND CEMENT CONCRETE SHALL BE CLASS 3000 CONFORMING TO THE STANDARD SPECIFICATIONS.
- WEAKENED PLANE JOINTS FOR PORTLAND CEMENT CONCRETE SHALL BE PLACED AT 15' INTERVALS.
- 3/8" EXPANSION JOINTS IN PORTLAND CEMENT CONCRETE SHALL BE PLACED AT CURB RETURNS.
- EPOXY CEMENT SHALL BE APPLIED AT A 10-15 MIL THICKNESS AND SHALL CONFORM TO THE REQUIREMENTS OF SECTION 9-26 OF THE STANDARD SPECIFICATIONS.
- CURBS SHALL HAVE A LIGHT BROOMED FINISH. GUTTERS SHALL BE FINISHED WITH A STEEL TROWEL.

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No.	DESC.	/ DATE	BY	

storhäng
 civil engineering | planning | surveying
 landscape architecture

510 east third avenue | spokane, wa | 99202
 p 509.242.1000 | f 509.242.1001

DETAIL SHEET

PROJECT TITLE: ELK RIDGE HEIGHTS - 1ST ADDITION SPOKANE COUNTY, WA

SHEET TITLE: SEAL

DATE	05/09/2016
DRAWN	RKJ
CHECKED	JDS
PROJECT NUMBER	13-058
DRAWING NO.	5 OF 5

DETAIL