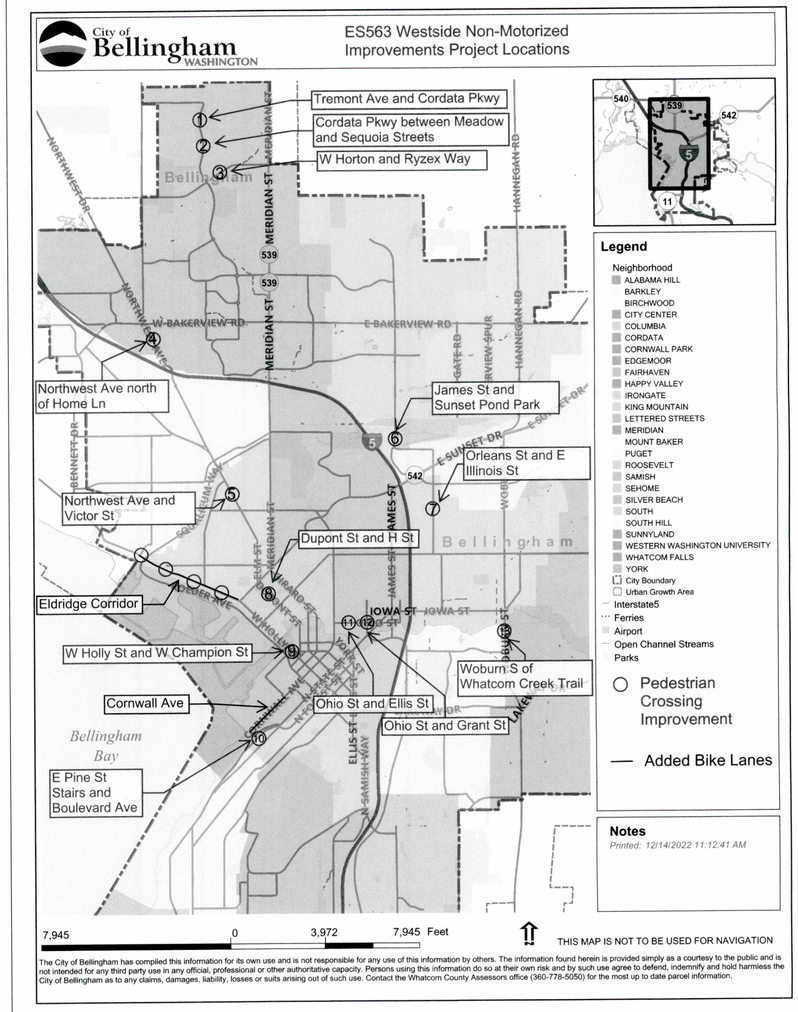
ES563 West Side Non-Motorized Improvements

CITY OF BELLINGHAM, WASHINGTON

SHEET INDEX

VICINITY MAP



SURVEYOR
JEPSON AND ASSOCIATES
222 GRAND AVENUE
(360) 733-5760

CHARLES SCHULHAUSER — STATE OF WASHINGTON — 34846 — REGISTERED PROFESSIONAL ENGINEER — 24 May 23

Date	No	Revision	By
	4		
	3		
	2		
	1		

PROJECT ENGINEER JJB
DESIGNED/DRAWN ELH
INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.
CITY ENGINEER C.M.A.S.
OPERATIONS ENGINEER M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 20'
Vert. 1"= NA

DATUM
NAD 83/98
NAVD 88

Job. No. ES-0563
Date 02/2023
Field Bk. FB 1068-2

WEST SIDE NON-MOTORIZED IMPROVEMENTS
SHEET INDEX AND VICINITY MAP

SHEET 1 OF 45

CONTACT PERSON: JESSICA BENNETT, P.E. , PROJECT ENGINEER AT 778-7923

ES563 WESTSIDE NON MOTORIZED IMPROVEMENTS BID SET

GENERAL NOTES

1) ALL WORK SHALL CONFORM TO THE LATEST EDITION OF "STANDARD SPECIFICATIONS FOR ROAD BRIDGE AND MUNICIPAL CONSTRUCTION" CURRENT EDITION (WSDOT) AND THE "CITY OF BELLINGHAM DEVELOPMENT GUIDELINES AND IMPROVEMENT STANDARDS" UNLESS INDICATED OTHERWISE BY THE CONTRACT DOCUMENTS. IN CASE OF A CONFLICT BETWEEN THE REGULATORY SPECIFICATIONS OR STANDARDS, THE MORE STRINGENT REQUIREMENT WILL PREVAIL. ALL REFERENCES TO "SPECIFICATION SECTIONS" REFER TO THE "STANDARD SPECIFICATIONS FOR ROAD BRIDGE AND MUNICIPAL CONSTRUCTION" UNLESS OTHERWISE NOTED.

2) THE BEDDING FOR PVC PIPE SHALL BE PEA GRAVEL, ACCORDING TO CITY OF BELLINGHAM STANDARD PLAN No. SS-750
ALL TRENCH BACKFILL UNDER EXISTING OR FUTURE PAVING SHALL BE BANK RUN GRAVEL FOR TRENCH BACKFILL AND SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY (MODIFIED PROCTOR).

3) PLUG ALL CULVERTS, SEWERS, AND CONDUITS PRIOR TO ABANDONMENT. AS PER STANDARD SPECIFICATIONS SECTION 7-08.3(4)

4) ALL LAWN AND VEGETATED AREAS OUTSIDE THE PROJECT LIMITS DISTURBED BY CONSTRUCTION EQUIPMENT, VEHICLES OR PERSONNEL SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER, AT THE CONTRACTORS EXPENSE.

5) THIS PROJECT MAY REQUIRE VARIOUS PERMITS AS OUTLINED IN THE PROJECT SPECIFICATION'S GENERAL PROVISIONS. ALL WORK SHALL BE PERFORMED IN A MANNER WHICH ENSURES CONFORMANCE WITH ANY PERMIT REQUIREMENTS.

6) THE CONTRACTOR SHALL ATTEND PRE-CONSTRUCTION CONFERENCE WITH THE CITY OF BELLINGHAM ENGINEERING DIVISION PRIOR TO BEGINNING CONSTRUCTION.

7) UNDERGROUND UTILITIES ARE KNOWN TO EXIST IN THE AREA OF CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE UTILITY OWNERS FOR LOCATIONS AND TO NOTIFY THE ENGINEER PROMPTLY OF ANY CONFLICT. THE ONE-CALL NUMBER FOR UNDERGROUND UTILITIES IS: 1-800-424-5555.

8) THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF ADJACENT UTILITIES WHICH MAY INCLUDE, BUT ARE NOT LIMITED TO, WATER, SEWER, STORM SEWER, POWER, TELEPHONE, CABLE TV, GAS, IRRIGATION, AND STREET LIGHTING.

9) THE CONTRACTOR SHALL NOTIFY RESIDENTS AND BUSINESSES 48 HOURS IN ADVANCE OF ANY WORK AFFECTING ACCESS OR SERVICE AND SHALL MINIMIZE INTERRUPTIONS TO DRIVEWAYS FOR RESIDENTS AND BUSINESSES ADJACENT TO THE PROJECT.

10) PUBLIC RIGHTS-OF-WAY SHALL BE KEPT IN A CLEAN AND SERVICEABLE CONDITION AT ALL TIMES. IN THE EVENT MATERIALS ARE INADVERTENTLY DEPOSITED ON ROADWAYS, THE MATERIAL SHALL BE PROMPTLY REMOVED. MATERIALS ARE TO BE SWEPT AND REMOVED WITH A VACUUM SWEEPER.

11) PUBLIC AND PRIVATE DRAINAGE WAYS SHALL BE PROTECTED FROM POLLUTION. NO MATERIAL IS TO BE DISCHARGED TO, OR DEPOSITED IN STORMWATER SYSTEMS THAT MAY RESULT IN VIOLATION OF STATE OR FEDERAL WATER QUALITY STANDARDS.

12) THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTING, MAINTAINING, & REMOVING EROSION CONTROL MEASURES (SILT FENCE, ROCK CHECK DAMS, SILT PONDS, CATCH BASIN FILTERS, ETC...) THROUGHOUT THE DURATION OF THE PROJECT. ALL EROSION CONTROL WORK IS CONSIDERED INCIDENTAL TO THE ITEMS OF WORK IN THE CONTRACT FOR THIS PROJECT.
REFER TO THE 'STORM WATER POLLUTION PREVENTION PLAN' SHEETS AND BID ITEMS NOTED IN THE CONTRACT PORTION OF THE PROJECT SPECIFICATIONS FOR SPECIFIC EROSION CONTROL NOTES.

13) CONTRACTOR SHALL TAKE NECESSARY PRECAUTION TO LOCATE AND PROTECT ALL EXISTING SURVEY MONUMENTS DURING CONSTRUCTION. ALL SURVEY MONUMENTS THAT MAY BE DISTURBED BY CONSTRUCTION SHALL BE IDENTIFIED, REFERENCED AND REPLACED IN ACCORDANCE WITH RECOGNIZED SURVEY PRACTICES BY A LICENSED LAND SURVEYOR PROVIDED BY THE CONTRACTOR SHALL COORDINATE WITH PROJECT ENGINEER PRIOR TO DESTRUCTION.

STORM NOTES

20) BEDDING AND BACKFILL FOR PVC STORM MAIN PIPE SHALL CONFORM TO CITY OF BELLINGHAM STANDARD PLAN No. DR-538.

21) STORM MAIN CLEANOUTS SHALL CONFORM TO CITY OF BELLINGHAM STANDARD NO. SS-720

EROSION CONTROL NOTES

60) THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION, MAINTENANCE AND REMOVAL OF ALL EROSION CONTROL MEASURES. (SILT FENCE, STRAW BALE DAMS, SILT PONDS, ETC., AS DIRECTED BY THE ENGINEER) THROUGHOUT THE DURATION OF THE PROJECT.

61) IN THE EVENT MATERIALS ARE INADVERTENTLY DEPOSITED ON ROADWAYS, THE MATERIAL SHALL BE PROMPTLY REMOVED. MATERIALS ARE TO BE SWEPT AND REMOVED PRIOR TO ANY STREET FLUSHING. PUBLIC AND PRIVATE DRAINAGE WAYS SHALL BE PROTECTED FROM POLLUTION. NO MATERIAL IS TO BE DISCHARGED OR DEPOSITED IN STORMWATER SYSTEMS THAT MAY RESULT IN VIOLATION OF STATE OR FEDERAL WATER QUALITY STANDARDS.

62) THE CONTRACTOR IS REQUIRED TO PREPARE AND IMPLEMENT A STORM WATER POLLUTION PREVENTION PLAN (SWPPP). A COPY OF THE SWPPP SHALL BE ON SITE THROUGHOUT THE DURATION OF CONSTRUCTION.

63) STABILIZE SOILS- ALL EXPOSED AND UNWORKED SOILS SHALL BE STABILIZED BY APPLICATION OF EFFECTIVE BEST MANAGEMENT PRACTICES, THAT PROTECT THE SOIL FROM THE EROSIVE FORCES OF WATER AND WIND. NO UNWORKED SOILS SHALL REMAIN EXPOSED FOR MORE THAN SEVEN (7) DAYS.

64) SAWCUTTING SLURRY AND CUTTINGS SHALL BE VACUUMED DURING CUTTING AND SURFACING OPERATIONS. SLURRY AND CUTTINGS SHALL NOT REMAIN ON PAVEMENT OVERNIGHT.

65) INLET PROTECTION MUST BE PROVIDED FOR ALL EXISTING CATCH BASINS DURING CONSTRUCTION. ALL CATCH BASINS WITHIN THE PROJECT LIMITS SHALL BE CLEANED OUT AT THE COMPLETION OF THE PROJECT AND ANY MATERIAL REMOVED SHALL BE PROPERLY DISPOSED OF.

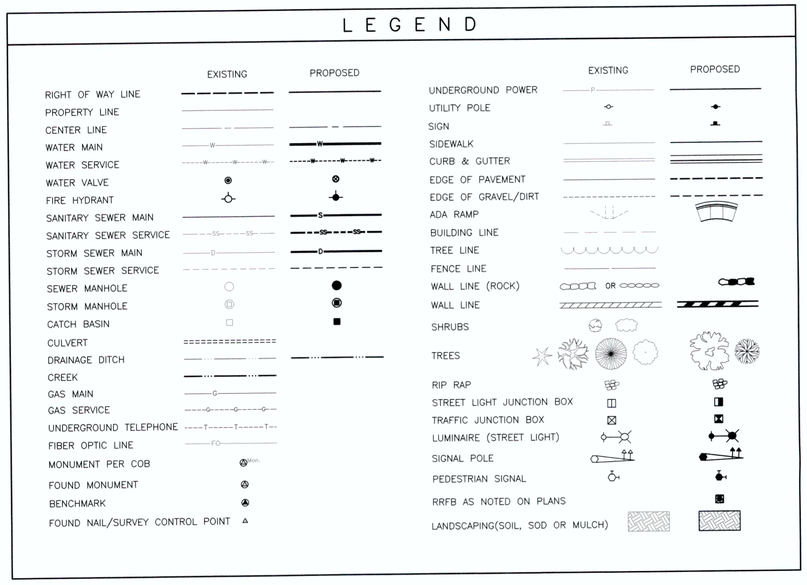
66) DURING ANY DITCH, CREEK & DRAINAGE WORK WATER SHALL BE DIVERTED AROUND THE PROJECT WITH A PUMP OR OTHER ADEQUATE METHOD APPROVED BY THE ENGINEER.

67) ANY MISCELLANEOUS DRAINAGE FOUND WILL BE REQUIRED TO BE REMOVED OR CONNECTED TO THE NEW DRAINAGE SYSTEM WITH THE DIRECTION OF THE ENGINEER. DISTURBED SOILS ARE TO BE MULCHED.

SURVEY MONUMENT AND BENCHMARK NOTE:

CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO LOCATE AND PROTECT ALL EXISTING SURVEY MONUMENTS DURING CONSTRUCTION. ALL SURVEY MONUMENTS THAT MAY BE DISTURBED BY CONSTRUCTION SHALL BE IDENTIFIED, REFERENCED, AND REPLACED IN ACCORDANCE WITH RECOGNIZED SURVEYING PRACTICES BY A LICENSED LAND SURVEYOR PROVIDED BY THE CONTRACTOR. CONTRACTOR SHALL COORDINATE WITH THE PROJECT ENGINEER PRIOR TO DESTRUCTION.

LEGEND



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2			
1			
Date	No	Revision	By

PROJECT ENGINEER JJB
DESIGNED/DRAWN ELH
INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.
CITY ENGINEER C.M.A.S.
OPERATIONS ENGINEER M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 20'
Vert. 1"= NA

DATUM
NAD 83/98
NAVD 88

Job. No. ES-0563
Date 02/2023
Field Bk. FB 1068-2

WEST SIDE NON-MOTORIZED IMPROVEMENTS
GENERAL NOTES AND LEGEND

SHEET 2 OF 45

CONTACT PERSON: JESSICA BENNETT , P.E. , PROJECT ENGINEER AT 778-7923

WEST SIDE NON-MOTORIZED IMPROVEMENTS

CITY OF BELLINGHAM PUBLIC WORKS PROJECT #ES563
SURVEY CONTROL WORKSHEET

SURVEYOR'S NOTES:

1. **HORIZONTAL DATUM:** RELATED TO WASHINGTON COORDINATE SYSTEM (NAD83/98), NORTH ZONE

   LINE HELD: **N63°09'02"W 3602.34'** BETWEEN FOUND BRASS DISKS (COB 706 AND 718) IN THE CENTERLINE OF ELDRIDGE AVE., AS SHOWN.

2. **VERTICAL DATUM:** NAVD88

   PROJECT BENCHMARKS:

PT #801 (COB 5848)	FND 2" BRASS DISK IN BRIDGE HEADWALL	EL=67.42' (HELD)
PT# 805 (COB 3513)	FND GIN SPIKE IN POWER POLE	EL=68.71'

3. DATE OF SURVEY: **JANUARY 25-27** & **31** AND **FEBRUARY 1, 2023**

4. PROCEDURES USED IN THIS SURVEY MEET OR EXCEED STANDARDS SET FORTH BY WAC 332-130-145: TOPOGRAPHIC ELEMENTS ON MAPS.

5. THE PURPOSE OF THIS SURVEY WAS TO COLLECT TOPOGRAPHIC DATA WITHIN THE RIGHT OF WAY OF THE SCOPED AREA.

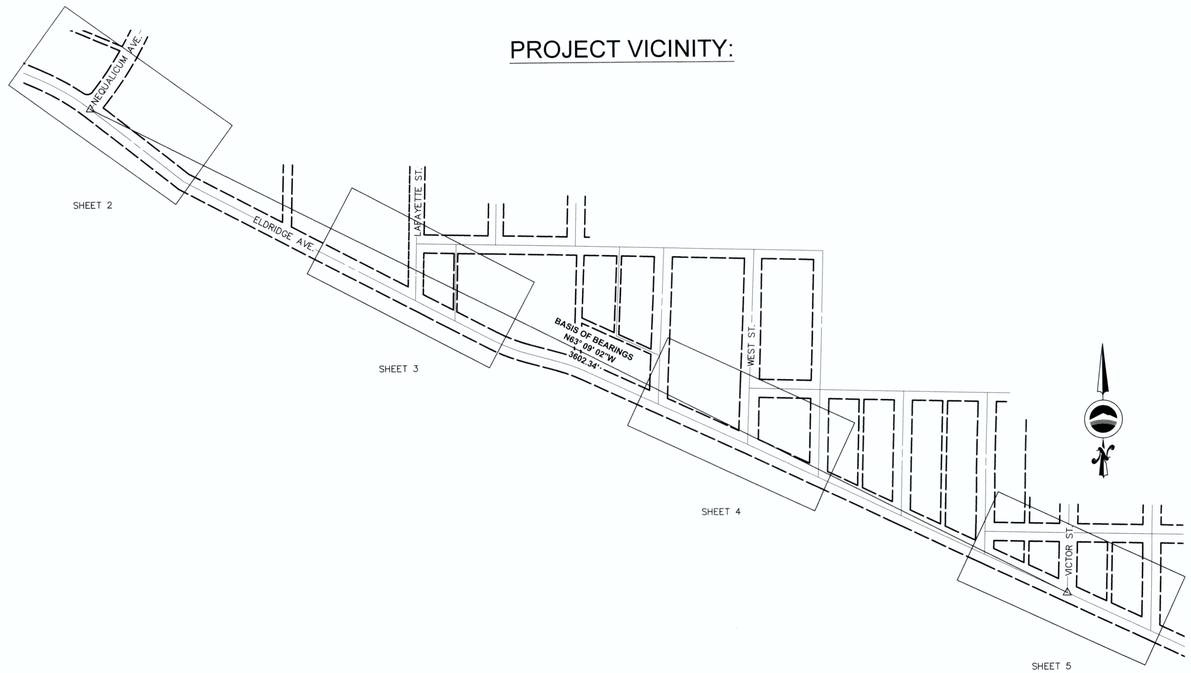
6. THIS SURVEY WAS ACCOMPLISHED USING STANDARD FIELD TRAVERSE PROCEDURES WITH A TOTAL STATION. VERTICAL CONTROL WAS ESTABLISHED USING CLOSED LOOP DIFFERENTIAL LEVELING. ALL MONUMENTS SHOWN WERE VISITED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.

7. SURFACE CONTOURS DEPICTED WITH 1' (MINOR) AND 5' (MAJOR) INTERVALS WERE GENERATED FROM FIELD OBSERVATIONS USING AUTOCAD CIVIL 3D (VERSION 2019) AND ARE TYPICALLY ACCURATE TO WITHIN APPROXIMATELY 0.5'±.

8. JEPSON AND ASSOCIATES ASSUMES NO LIABILITY FOR ANY SUBSURFACE CONDITIONS OR FEATURES THAT MAY EXIST WHICH WERE UNDETECTABLE OR NOT VIABLE AT THE TIME OF THIS SURVEY AND THEREAFTER.

9. THIS IS NOT A BOUNDARY SURVEY AND IS NOT INTENDED TO BE USED AS SUCH, SEE A RECORD OF SURVEY OR PLAT MAP.

PROJECT VICINITY:



SHEET INDEX:

LEGEND:

△ SURVEY CONTROL

◉ SET 1/2" REBAR/CAP

CHRISTOPHER MICHAEL JEPSON — STATE OF WASHINGTON — 55832 — REGISTERED PROFESSIONAL LAND SURVEYOR — 4-07-23

Date	No	Revision	By
	4		
	3		
	2		
	1		

PROJECT ENGINEER_____
DESIGNED/DRAWN_____
INSPECTOR_____

DIRECTOR PUBLIC WORKS E.C.J.
CITY ENGINEER C.M.A.S.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 250'
Vert. 1"= 5'

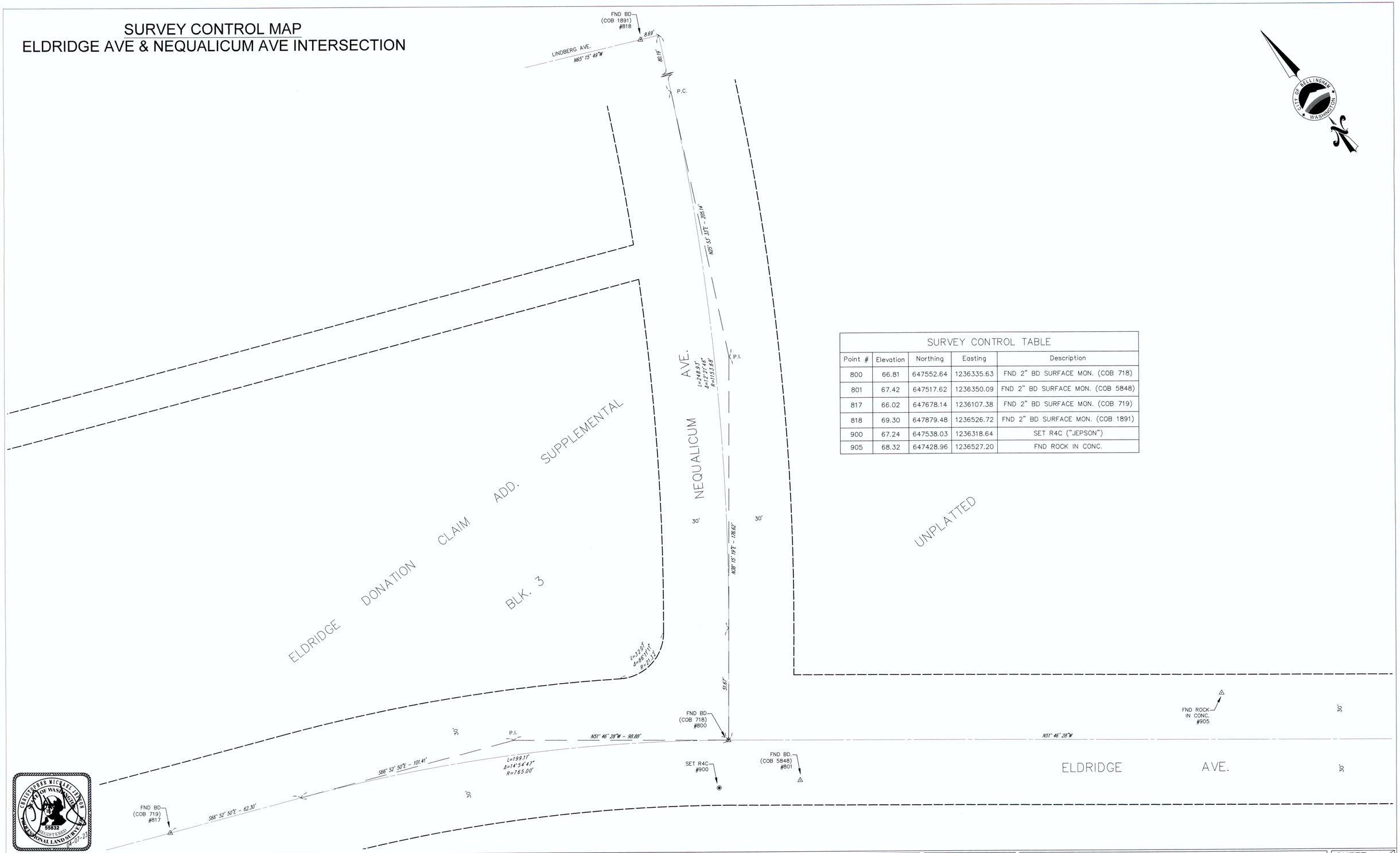
DATUM
NAD 83/98
NAVD 88

Job. No. ES563
Date 04/07/2023
Field Bk. MAP19, DGB21&22

WEST SIDE NON-MOTORIZED IMPROVEMENTS
SURVEY CONTROL ELDRIDGE AVE.

SHEET 3 OF 45

SURVEY CONTROL MAP
ELDRIDGE AVE & NEQUALICUM AVE INTERSECTION



SURVEY CONTROL TABLE

Point #	Elevation	Northing	Easting	Description
800	66.81	647552.64	1236335.63	FND 2" BD SURFACE MON. (COB 718)
801	67.42	647517.62	1236350.09	FND 2" BD SURFACE MON. (COB 5848)
817	66.02	647678.14	1236107.38	FND 2" BD SURFACE MON. (COB 719)
818	69.30	647879.48	1236526.72	FND 2" BD SURFACE MON. (COB 1891)
900	67.24	647538.03	1236318.64	SET R4C ("JEPSON")
905	68.32	647428.96	1236527.20	FND ROCK IN CONC.

CHRISTOPHER MICHAEL JEPSON
STATE OF WASHINGTON
56832
REGISTERED
PROFESSIONAL LAND SURVEYOR
12-07-23

Date	No	Revision	By
	4		
	3		
	2		
	1		

PROJECT ENGINEER
DESIGNED/DRAWN
INSPECTOR

DIRECTOR PUBLIC WORKS E.C.J.
CITY ENGINEER C.M.A.S.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 20'
Vert. 1"= 5"

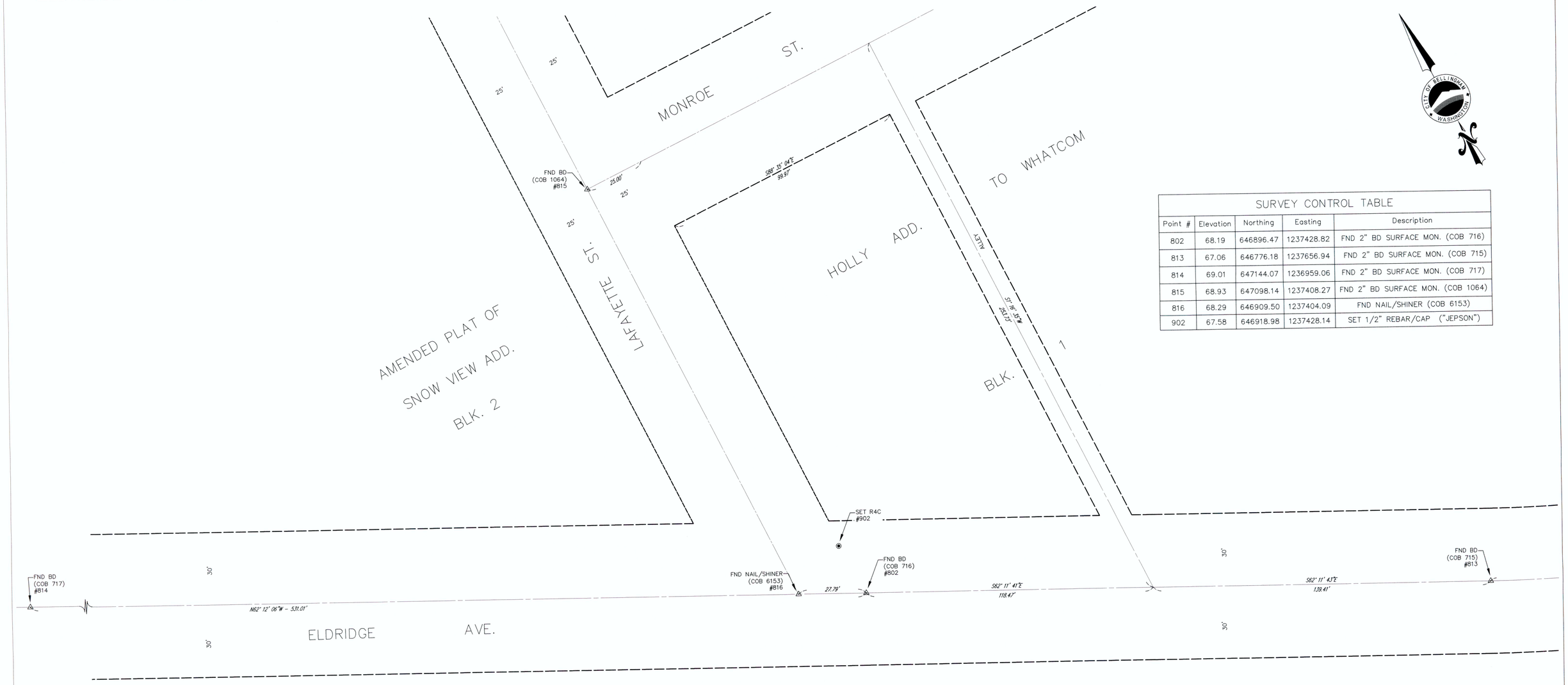
DATUM
NAD 83/98
NAVD 88

Job. No. ES563
Date 04/07/2023
Field Bk. MAP19, DGB21&22

WEST SIDE NON-MOTORIZED IMPROVEMENTS
SURVEY CONTROL ELDRIDGE AVE.

SHEET 4 OF 45

SURVEY CONTROL MAP
ELDRIDGE AVE & LAFAYETTE ST. INTERSECTION



SURVEY CONTROL TABLE				
Point #	Elevation	Northing	Easting	Description
802	68.19	646896.47	1237428.82	FND 2" BD SURFACE MON. (COB 716)
813	67.06	646776.18	1237656.94	FND 2" BD SURFACE MON. (COB 715)
814	69.01	647144.07	1236959.06	FND 2" BD SURFACE MON. (COB 717)
815	68.93	647098.14	1237408.27	FND 2" BD SURFACE MON. (COB 1064)
816	68.29	646909.50	1237404.09	FND NAIL/SHINER (COB 6153)
902	67.58	646918.98	1237428.14	SET 1/2" REBAR/CAP ("JEPSON")

CHRISTOPHER MICHAEL JEPSON
STATE OF WASHINGTON
55832
REGISTERED
PROFESSIONAL LAND SURVEYOR
04-07-23

Date	No	Revision	By
	4		
	3		
	2		
	1		

PROJECT ENGINEER
DESIGNED/DRAWN
INSPECTOR

DIRECTOR PUBLIC WORKS E.C.J.
CITY ENGINEER C.M.A.S.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 20'
Vert. 1"= 5"

DATUM
NAD 83/98
NAVD 88

Job. No. ES563
Date 04/07/2023
Field Bk. MAP19, DGB21&22

WEST SIDE NON-MOTORIZED IMPROVEMENTS
SURVEY CONTROL ELDRIDGE AVE.

SHEET 5 OF 45

SURVEY CONTROL MAP
ELDRIDGE AVE & WEST ST. INTERSECTION

SURVEY CONTROL TABLE				
Point #	Elevation	Northing	Easting	Description
803	69.66	646423.95	1238497.42	FND 2" BD SURFACE MON (COB 710)
809	69.44	646313.29	1238731.09	FND 2" BD SURFACE MON. (COB 709)
810	69.48	646610.21	1238504.74	FND CONC. MON. (COB 1417)
811	69.85	646595.79	1238521.41	FND BD BM (COB 5847)
812	67.87	646559.51	1238203.53	FND BD SURFACE MON. (COB 711)
903	68.81	646417.06	1238475.04	SET NAIL

CHRISTOPHER MICHAEL JENSEN
STATE OF WASHINGTON
55832
REGISTERED
PROFESSIONAL LAND SURVEYOR
12-07-23

Date	No	Revision	By
	4		
	3		
	2		
	1		

PROJECT ENGINEER
DESIGNED/DRAWN
INSPECTOR

DIRECTOR PUBLIC WORKS E.C.J.
CITY ENGINEER C.M.A.S.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 20'
Vert. 1"= 5"

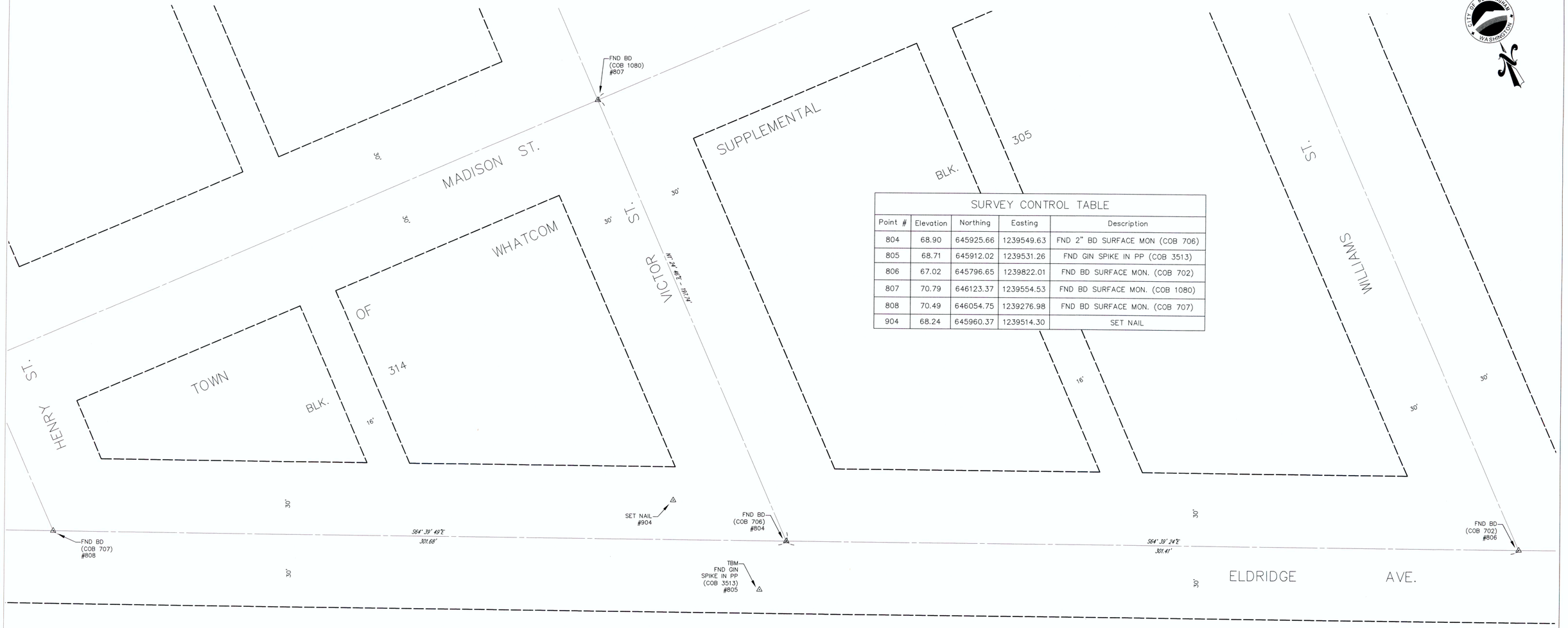
DATUM
NAD 83/98
NAVD 88

Job. No. ES563
Date 04/07/2023
Field Bk. MAP19, DGB21&22

WEST SIDE NON-MOTORIZED IMPROVEMENTS
SURVEY CONTROL ELDRIDGE AVE.

SHEET 6 OF 45

SURVEY CONTROL MAP
ELDRIDGE AVE & VICTOR ST. INTERSECTION



SURVEY CONTROL TABLE				
Point #	Elevation	Northing	Easting	Description
804	68.90	645925.66	1239549.63	FND 2" BD SURFACE MON (COB 706)
805	68.71	645912.02	1239531.26	FND GIN SPIKE IN PP (COB 3513)
806	67.02	645796.65	1239822.01	FND BD SURFACE MON. (COB 702)
807	70.79	646123.37	1239554.53	FND BD SURFACE MON. (COB 1080)
808	70.49	646054.75	1239276.98	FND BD SURFACE MON. (COB 707)
904	68.24	645960.37	1239514.30	SET NAIL

CHRISTOPHER MICHAEL JEPSON
STATE OF WASHINGTON
55832
REGISTERED
PROFESSIONAL LAND SURVEYOR
04-07-23

Date	No	Revision	By
	4		
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PROJECT ENGINEER
DESIGNED/DRAWN
INSPECTOR

DIRECTOR PUBLIC WORKS E.C.J.
CITY ENGINEER C.M.A.S.
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CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

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Date 04/07/2023
Field Bk. MAP19, DGB21&22

WEST SIDE NON-MOTORIZED IMPROVEMENTS
SURVEY CONTROL ELDRIDGE AVE.

SHEET 7 OF 45

WEST SIDE NON-MOTORIZED IMPROVEMENTS

CITY OF BELLINGHAM PUBLIC WORKS PROJECT #ES563
SURVEY CONTROL WORKSHEET

SURVEYOR'S NOTES:

1. **HORIZONTAL DATUM:** RELATED TO WASHINGTON COORDINATE SYSTEM (NAD83/98), NORTH ZONE

   LINES HELD:

   S1°34'54"E 2021.66' BETWEEN FOUND BRASS DISKS (COB 2788 & 3709) IN THE CENTERLINE OF CORDATA PARKWAY, AS SHOWN. (TREMONT & CORDATA SURVEYS)

   N57°37'46"E 815.22' BETWEEN FOUND BRASS DISK (COB 2185) AT THE INTERSECTION OF CORDATA PARKWAY AND HORTON RD., AND FOUND BRASS DISK (COB 3036) AT THE INTERSECTION OF HORTON RD. AND RYZEX WAY, AS SHOWN. (RYZEX SURVEY)

   BASIS OF COORDINATES:

COB 2788 (#902)	2" BRASS DISK	N: 665397.86	E: 1239342.91
COB 3709 (#911)	2" BRASS DISK	N: 663376.97	E: 1239398.71

2. **VERTICAL DATUM:** NAVD88

   PROJECT BENCHMARKS:

COB 3030 (#919)	FOUND 3" BRASS DISK IN CASE	EL=166.80'
COB 3036 (#916)	FOUND 2" BRASS DISK	EL=165.36'
COB 3709 (#911)	FOUND 2" BRASS DISK	EL=162.91' (R=162.90')

3. DATE OF SURVEY: **APRIL 13, 14, 17, 18, 19, & 24, 2023**

4. PROCEDURES USED IN THIS SURVEY MEET OR EXCEED STANDARDS SET FORTH BY WAC 332-130-145: TOPOGRAPHIC ELEMENTS ON MAPS.

5. THE PURPOSE OF THIS SURVEY WAS TO COLLECT TOPOGRAPHIC DATA WITHIN THE RIGHT OF WAY OF THE SCOPED AREA.

6. THIS SURVEY WAS ACCOMPLISHED USING STANDARD FIELD TRAVERSE PROCEDURES WITH A TOTAL STATION. VERTICAL CONTROL WAS ESTABLISHED USING CLOSED LOOP DIFFERENTIAL LEVELING. ALL MONUMENTS SHOWN WERE VISITED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.

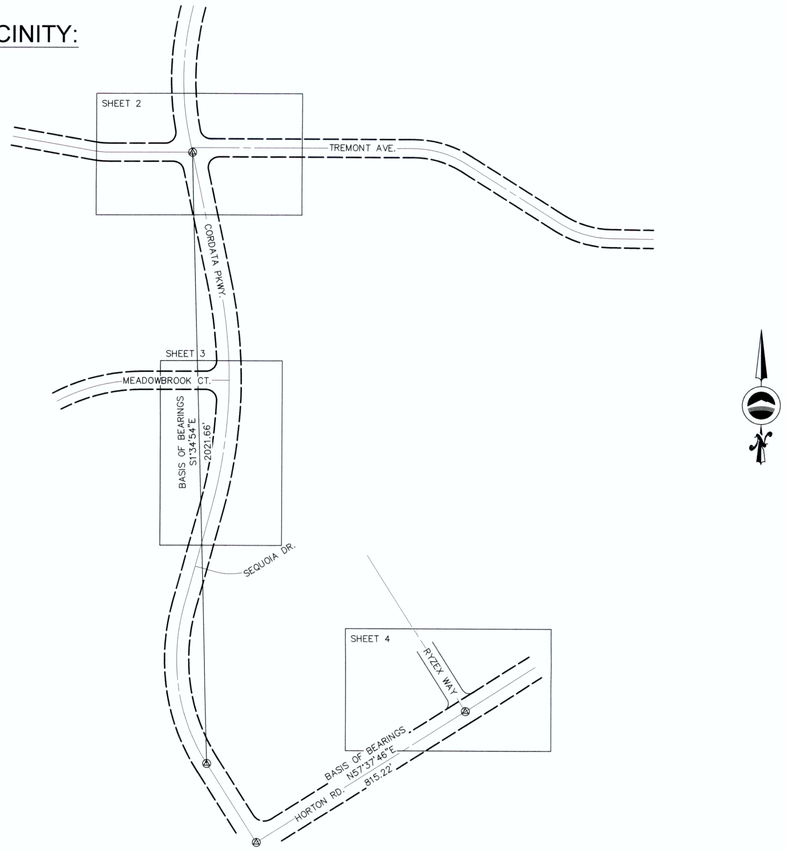
7. SURFACE CONTOURS DEPICTED WITH 1' (MINOR) AND 5' (MAJOR) INTERVALS WERE GENERATED FROM FIELD OBSERVATIONS USING AUTOCAD CIVIL 3D (VERSION 2019) AND ARE TYPICALLY ACCURATE TO WITHIN APPROXIMATELY 0.5'±.

8. JEPSON AND ASSOCIATES ASSUMES NO LIABILITY FOR ANY SUBSURFACE CONDITIONS OR FEATURES THAT MAY EXIST WHICH WERE UNDETECTABLE OR NOT VIABLE AT THE TIME OF THIS SURVEY AND THEREAFTER.

9. THIS IS NOT A BOUNDARY SURVEY AND IS NOT INTENDED TO BE USED AS SUCH, SEE A RECORD OF SURVEY OR PLAT MAP.

SHEET INDEX:

PROJECT VICINITY:



LEGEND:

△ SURVEY CONTROL
⊗ FOUND BRASS DISK MON
BD BRASS DISK

Date	No	Revision	By
	4		
	3		
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	1		

PROJECT ENGINEER
DESIGNED/DRAWN
INSPECTOR

DIRECTOR PUBLIC WORKS E.C.J.
CITY ENGINEER C.M.A.S.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 250'
Vert. 1"= 5'

DATUM
NAD 83/98
NAVD 88

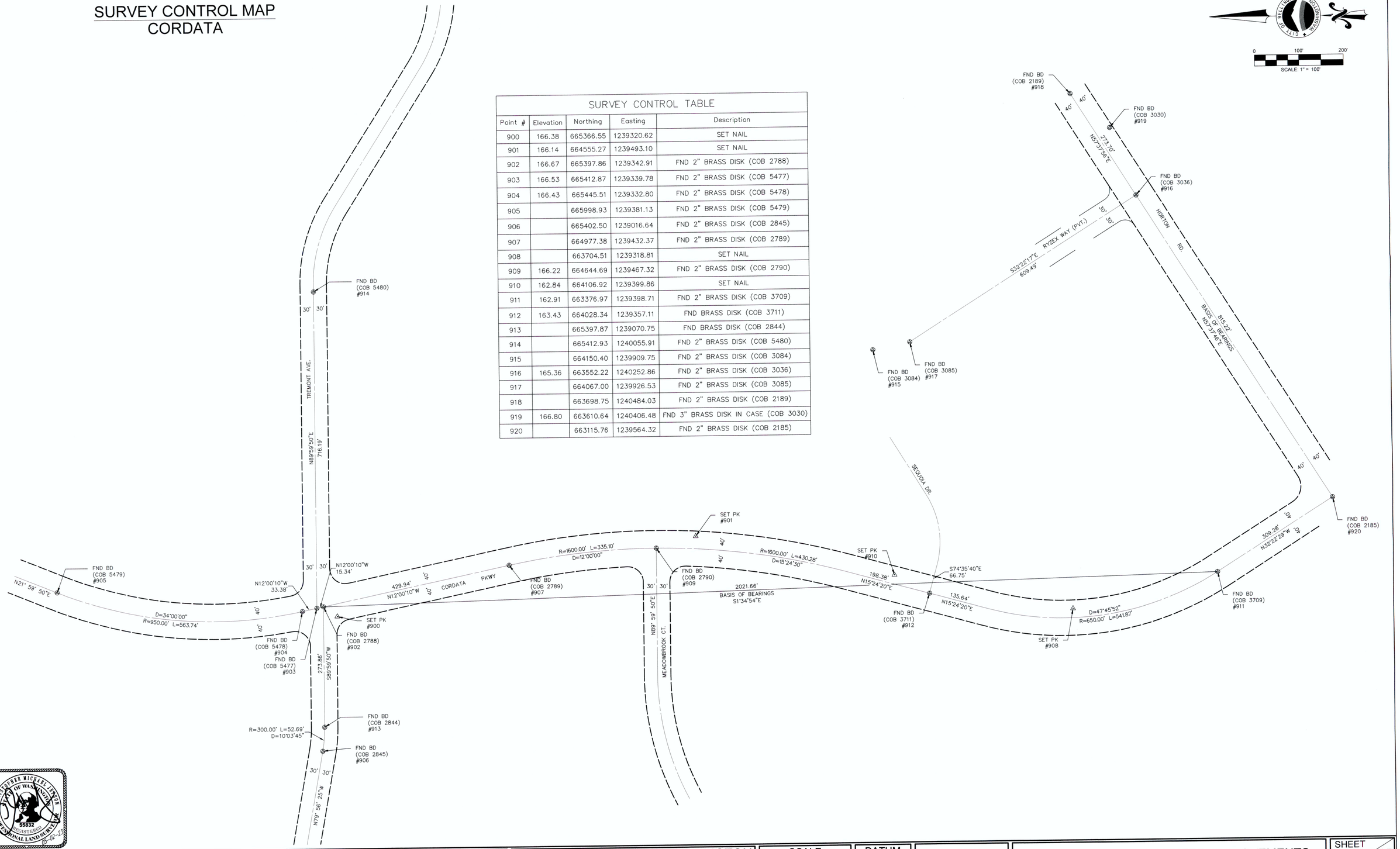
Job. No. ES563
Date 05/02/2023
Field Bk. 1068-2

WEST SIDE NON-MOTORIZED IMPROVEMENTS
SURVEY CONTROL CORDATA PKWY.

SHEET 8 OF 45

SURVEY CONTROL MAP
CORDATA

SURVEY CONTROL TABLE				
Point #	Elevation	Northing	Easting	Description
900	166.38	665366.55	1239320.62	SET NAIL
901	166.14	664555.27	1239493.10	SET NAIL
902	166.67	665397.86	1239342.91	FND 2" BRASS DISK (COB 2788)
903	166.53	665412.87	1239339.78	FND 2" BRASS DISK (COB 5477)
904	166.43	665445.51	1239332.80	FND 2" BRASS DISK (COB 5478)
905		665998.93	1239381.13	FND 2" BRASS DISK (COB 5479)
906		665402.50	1239016.64	FND 2" BRASS DISK (COB 2845)
907		664977.38	1239432.37	FND 2" BRASS DISK (COB 2789)
908		663704.51	1239318.81	SET NAIL
909	166.22	664644.69	1239467.32	FND 2" BRASS DISK (COB 2790)
910	162.84	664106.92	1239399.86	SET NAIL
911	162.91	663376.97	1239398.71	FND 2" BRASS DISK (COB 3709)
912	163.43	664028.34	1239357.11	FND BRASS DISK (COB 3711)
913		665397.87	1239070.75	FND BRASS DISK (COB 2844)
914		665412.93	1240055.91	FND 2" BRASS DISK (COB 5480)
915		664150.40	1239909.75	FND 2" BRASS DISK (COB 3084)
916	165.36	663552.22	1240252.86	FND 2" BRASS DISK (COB 3036)
917		664067.00	1239926.53	FND 2" BRASS DISK (COB 3085)
918		663698.75	1240484.03	FND 2" BRASS DISK (COB 2189)
919	166.80	663610.64	1240406.48	FND 3" BRASS DISK IN CASE (COB 3030)
920		663115.76	1239564.32	FND 2" BRASS DISK (COB 2185)



CHRISTOPHER MICHAEL JENSEN
STATE OF WASHINGTON
55832
REGISTERED
PROFESSIONAL LAND SURVEYOR
05-02-23

Date	No	Revision	By
	4		
	3		
	2		
	1		

PROJECT ENGINEER
DESIGNED/DRAWN
INSPECTOR

DIRECTOR PUBLIC WORKS E.C.J.
CITY ENGINEER C.M.A.S.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 100'
Vert. 1"= 5"

DATUM
NAD 83/98
NAVD 88

Job. No. ES563
Date 05/02/2023
Field Bk. 1068-2

WEST SIDE NON-MOTORIZED IMPROVEMENTS
SURVEY CONTROL CORDATA PKWY.

SHEET 9 OF 45

WEST SIDE NON-MOTORIZED IMPROVEMENTS

CITY OF BELLINGHAM PUBLIC WORKS PROJECT #ES563
SURVEY CONTROL WORKSHEET

SURVEYOR'S NOTES:

1. **HORIZONTAL DATUM:** RELATED TO WASHINGTON COORDINATE SYSTEM (NAD83/98), NORTH ZONE

   LINE HELD: **S44°18'41"E 349.73'** (349.77' MEAS.) BETWEEN FOUND BRASS DISK MONUMENTS (COB 2494 AND 803) IN THE CENTERLINE OF W. HOLLY ST., AS SHOWN.

   BASIS OF COORDINATES:

COB 2494 (#903)	BRASS DISK	N: 643281.33	E: 1242631.68
COB 803 (#905)	BRASS DISK	N: 643031.05	E: 1242876.02

2. **VERTICAL DATUM:** NAVD88

   PROJECT BENCHMARKS:

COB 5594 (#908)	FOUND BRASS DISK BENCHMARK	EL=26.15'
COB 5869 (#904)	FOUND BRASS DISK BENCHMARK	EL=61.94'

3. DATE OF SURVEY: **APRIL 3 & 12, 2023**

4. PROCEDURES USED IN THIS SURVEY MEET OR EXCEED STANDARDS SET FORTH BY WAC 332-130-145: TOPOGRAPHIC ELEMENTS ON MAPS.

5. THE PURPOSE OF THIS SURVEY WAS TO COLLECT TOPOGRAPHIC DATA WITHIN THE RIGHT OF WAY OF THE SCOPED AREA.

6. THIS SURVEY WAS ACCOMPLISHED USING A COMBINATION OF RELATIVE GNSS OBSERVATIONS WITH A BASE/ROVER RTK CONFIGURATION AND STANDARD FIELD TRAVERSE PROCEDURES WITH A TOTAL STATION. VERTICAL CONTROL WAS ESTABLISHED USING CLOSED LOOP DIFFERENTIAL LEVELING. ALL MONUMENTS SHOWN WERE VISITED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.

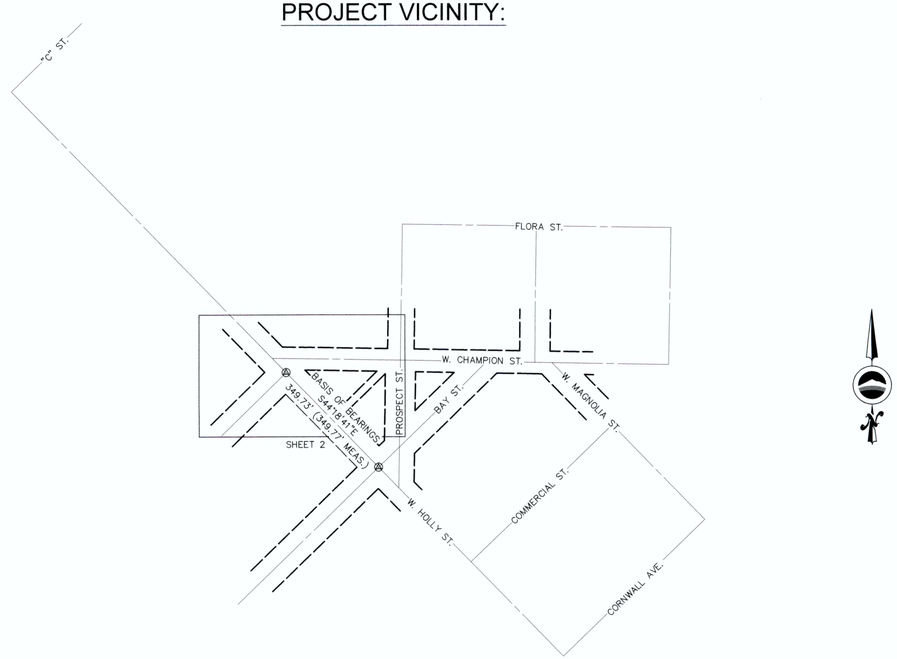
7. SURFACE CONTOURS DEPICTED WITH 1' (MINOR) AND 5' (MAJOR) INTERVALS WERE GENERATED FROM FIELD OBSERVATIONS USING AUTOCAD CIVIL 3D (VERSION 2019) AND ARE TYPICALLY ACCURATE TO WITHIN APPROXIMATELY 0.5'±.

8. JEPSON AND ASSOCIATES ASSUMES NO LIABILITY FOR ANY SUBSURFACE CONDITIONS OR FEATURES THAT MAY EXIST WHICH WERE UNDETECTABLE OR NOT VIABLE AT THE TIME OF THIS SURVEY AND THEREAFTER.

9. THIS IS NOT A BOUNDARY SURVEY AND IS NOT INTENDED TO BE USED AS SUCH, SEE A RECORD OF SURVEY OR PLAT MAP.

SHEET INDEX:

PROJECT VICINITY:



LEGEND:

△	SURVEY CONTROL
⊕	FOUND CENTERLINE MON.
Ⓢ	SEWER MANHOLE
BD	BRASS DISK

CHAD JEPSON MICHAEL JENSON — STATE OF WASHINGTON — 55832 — REGISTERED PROFESSIONAL LAND SURVEYOR — 05-03-23

Date	No	Revision	By
	4		
	3		
	2		
	1		

PROJECT ENGINEER
DESIGNED/DRAWN
INSPECTOR

DIRECTOR PUBLIC WORKS E.C.J.
CITY ENGINEER C.M.A.S.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 200'
Vert. 1"= 5'

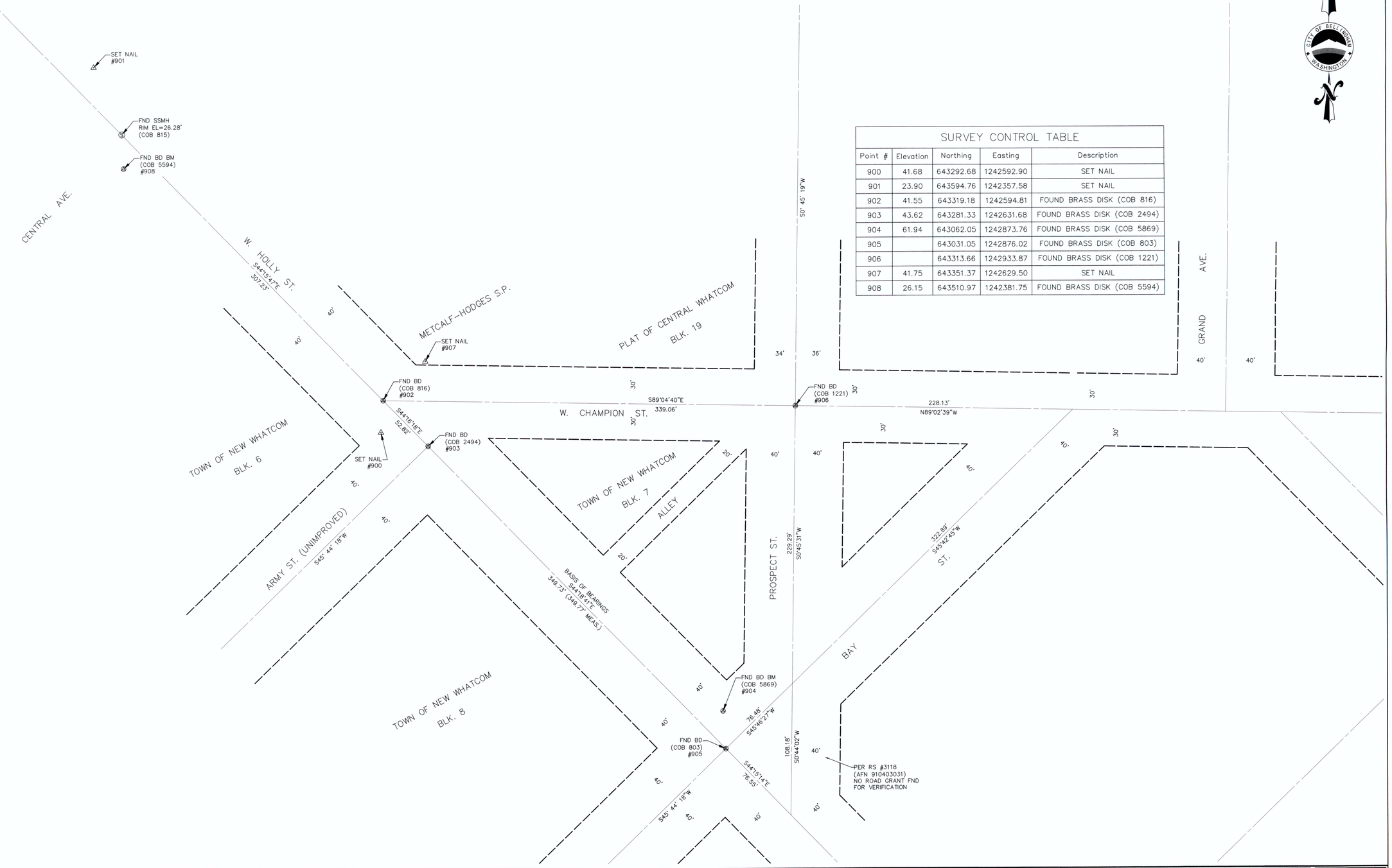
DATUM
NAD 83/98
NAVD 88

Job. No. ES563
Date 05/03/2023
Field Bk. 1068-2

WEST SIDE NON-MOTORIZED IMPROVEMENTS
SURVEY CONTROL W. HOLLY ST. & W. CHAMPION ST.

SHEET 10 OF 45

SURVEY CONTROL MAP
W. HOLLY ST. & W. CHAMPION ST. INTERSECTION



SURVEY CONTROL TABLE

Point #	Elevation	Northing	Easting	Description
900	41.68	643292.68	1242592.90	SET NAIL
901	23.90	643594.76	1242357.58	SET NAIL
902	41.55	643319.18	1242594.81	FOUND BRASS DISK (COB 816)
903	43.62	643281.33	1242631.68	FOUND BRASS DISK (COB 2494)
904	61.94	643062.05	1242873.76	FOUND BRASS DISK (COB 5869)
905		643031.05	1242876.02	FOUND BRASS DISK (COB 803)
906		643313.66	1242933.87	FOUND BRASS DISK (COB 1221)
907	41.75	643351.37	1242629.50	SET NAIL
908	26.15	643510.97	1242381.75	FOUND BRASS DISK (COB 5594)

CHRISTOPHER MICHAEL JENSEN
STATE OF WASHINGTON
55832
REGISTERED
PROFESSIONAL LAND SURVEYOR
05-03-23

Date	No	Revision	By
	4		
	3		
	2		
	1		

PROJECT ENGINEER
DESIGNED/DRAWN
INSPECTOR

DIRECTOR PUBLIC WORKS E.C.J.
CITY ENGINEER C.M.A.S.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 40'
Vert. 1"= 5"

DATUM
NAD 83/98
NAVD 88

Job. No. ES563
Date 05/03/2023
Field Bk. 1068-2

WEST SIDE NON-MOTORIZED IMPROVEMENTS
SURVEY CONTROL W. HOLLY ST. & W. CHAMPION ST.

SHEET 11 OF 45

WEST SIDE NON-MOTORIZED IMPROVEMENTS

CITY OF BELLINGHAM PUBLIC WORKS PROJECT #ES563
SURVEY CONTROL WORKSHEET

SURVEYOR'S NOTES:

1. **HORIZONTAL DATUM:** RELATED TO WASHINGTON COORDINATE SYSTEM (NAD83/98), NORTH ZONE

   LINE HELD: **N26°51'10"W 684.34'** (684.39' MEAS.) BETWEEN FOUND BRASS DISK (COB 1156) AT THE INTERSECTION OF NORTHWEST AVE. AND VICTOR ST., AND FOUND BRASS DISK (COB 1155) AT THE INTERSECTION OF NORTHWEST AVE. AND LYNN ST., AS SHOWN.

   BASIS OF COORDINATES:

COB 1155 (#907)	2" BRASS DISK	N: 650581.56	E: 1239973.15
COB 871 (#911)	CONC. MON W/ PIN	N: 649336.96	E: 1239911.70

2. **VERTICAL DATUM:** NAVD88

   METHOD: CLOSED LOOP DIFFERENTIAL LEVELING

   PROJECT BENCHMARKS:

COB 5843	BRASS DISK BM	EL=81.24'
COB 4693	LIGHT POLE BOLT	EL=82.16'
COB 3508	60D NAIL IN UTILITY POLE	EL=81.81'

3. DATE OF SURVEY: **MARCH 23** & **24** AND **APRIL 3, 2023**

4. PROCEDURES USED IN THIS SURVEY MEET OR EXCEED STANDARDS SET FORTH BY WAC 332-130-145: TOPOGRAPHIC ELEMENTS ON MAPS.

5. THE PURPOSE OF THIS SURVEY WAS TO COLLECT TOPOGRAPHIC DATA WITHIN THE RIGHT OF WAY OF THE SCOPED AREA.

6. THIS SURVEY WAS ACCOMPLISHED USING STANDARD FIELD TRAVERSE PROCEDURES WITH A TOTAL STATION. VERTICAL CONTROL WAS ESTABLISHED USING CLOSED LOOP DIFFERENTIAL LEVELING. ALL MONUMENTS SHOWN WERE VISITED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.

7. SURFACE CONTOURS DEPICTED WITH 1' (MINOR) AND 5' (MAJOR) INTERVALS WERE GENERATED FROM FIELD OBSERVATIONS USING AUTOCAD CIVIL 3D (VERSION 2019) AND ARE TYPICALLY ACCURATE TO WITHIN APPROXIMATELY 0.5'±.

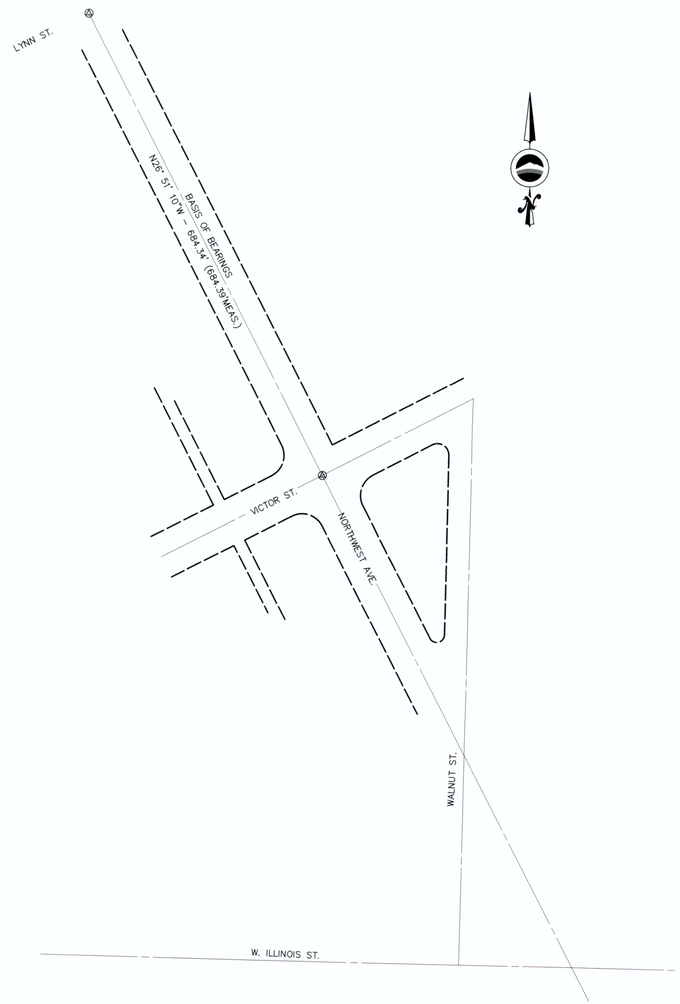
8. JEPSON AND ASSOCIATES ASSUMES NO LIABILITY FOR ANY SUBSURFACE CONDITIONS OR FEATURES THAT MAY EXIST WHICH WERE UNDETECTABLE OR NOT VIABLE AT THE TIME OF THIS SURVEY AND THEREAFTER.

9. THIS IS NOT A BOUNDARY SURVEY AND IS NOT INTENDED TO BE USED AS SUCH, SEE A RECORD OF SURVEY OR PLAT MAP.

LEGEND:

△	SURVEY CONTROL
⊗	FOUND CENTERLINE MON.
BD	BRASS DISK

PROJECT VICINITY:



SHEET INDEX:

CHRISTOPHER MICHAEL LENNEY — STATE OF WASHINGTON — 55832 — REGISTERED PROFESSIONAL LAND SURVEYOR — 05-02-23

Date	No	Revision	By
	4		
	3		
	2		
	1		

PROJECT ENGINEER
DESIGNED/DRAWN
INSPECTOR

DIRECTOR PUBLIC WORKS E.C.J.
CITY ENGINEER C.M.A.S.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 250'
Vert. N/A

DATUM
NAD 83/98
NAVD 88

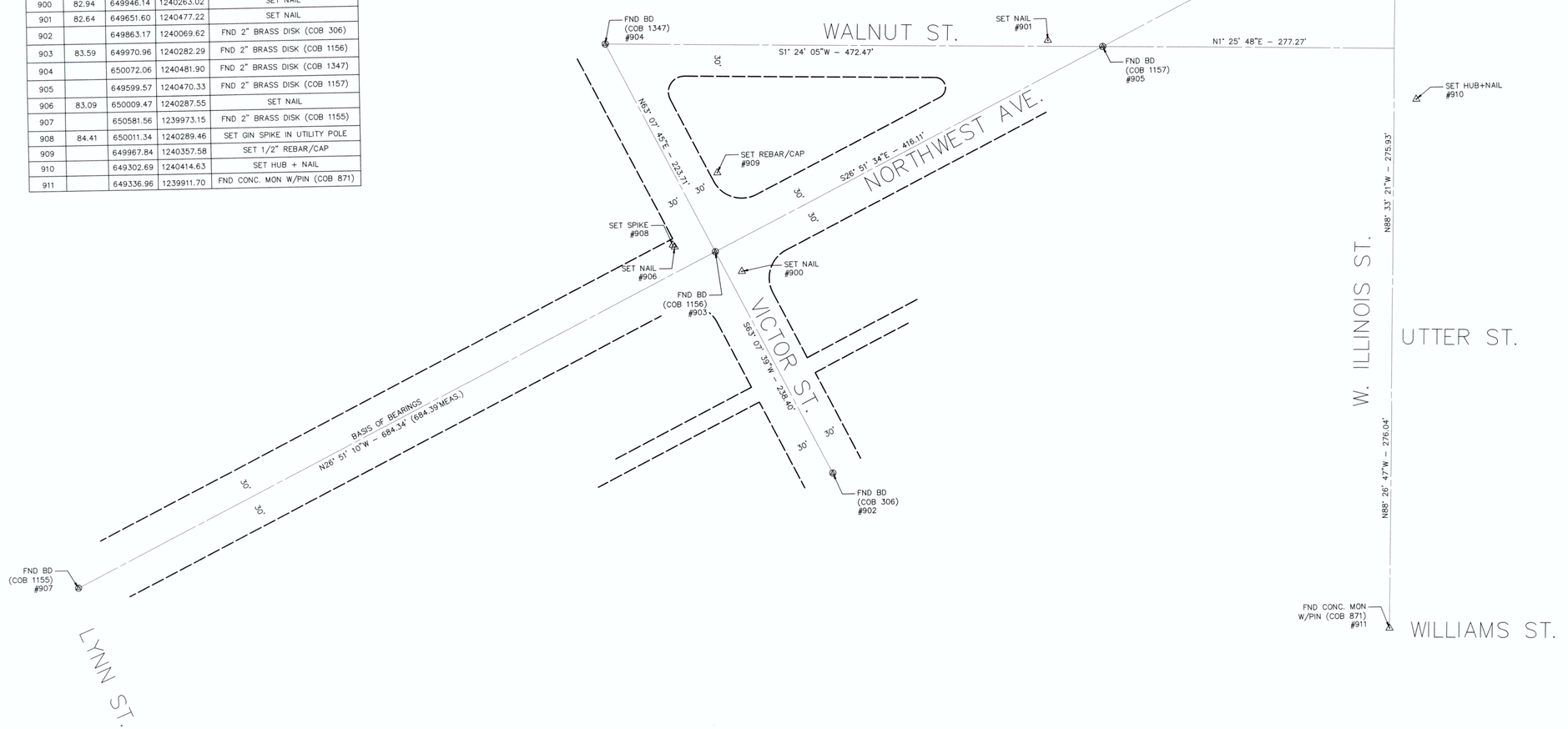
Job. No. ES563
Date 05/02/2023
Field Bk. 1068-1

WEST SIDE NON-MOTORIZED IMPROVEMENTS
SURVEY CONTROL NORTHWEST AVE. & VICTOR ST.

SHEET 12 OF 45

SURVEY CONTROL MAP
NORTHWEST AVE. & VICTOR ST. INTERSECTION

SURVEY CONTROL TABLE				
Point #	Elevation	Northing	Easting	Description
900	82.94	649946.14	1240263.02	SET NAIL
901	82.64	649651.60	1240477.22	SET NAIL
902		649863.17	1240069.62	FND 2" BRASS DISK (COB 306)
903	83.59	649970.96	1240282.29	FND 2" BRASS DISK (COB 1156)
904		650072.06	1240481.90	FND 2" BRASS DISK (COB 1347)
905		649599.57	1240470.33	FND 2" BRASS DISK (COB 1157)
906	83.09	650009.47	1240287.55	SET NAIL
907		650581.56	1239973.15	FND 2" BRASS DISK (COB 1155)
908	84.41	650011.34	1240289.46	SET GIN SPIKE IN UTILITY POLE
909		649967.84	1240357.58	SET 1/2" REBAR/CAP
910		649302.69	1240414.63	SET HUB + NAIL
911		649336.96	1239911.70	FND CONC. MON W/PIN (COB 871)



STATE OF WASHINGTON
CHRISTOPHER MICHAEL LYNCH
55832
REGISTERED
PROFESSIONAL LAND SURVEYOR
05-02-23

No	Date	Revision	By
4			
3			
2			
1			

PROJECT ENGINEER
DESIGNED/DRAWN
INSPECTOR

DIRECTOR PUBLIC WORKS E.C.J.
CITY ENGINEER C.M.A.S.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 60'
Vert. N/A

DATUM
NAD 83/98
NAVD 88

Job. No. ES563
Date 05/02/2023
Field Bk. 1068-1

WEST SIDE NON-MOTORIZED IMPROVEMENTS
SURVEY CONTROL NORTHWEST AVE. & VICTOR ST.

SHEET 13 OF 45

WEST SIDE NON-MOTORIZED IMPROVEMENTS

CITY OF BELLINGHAM PUBLIC WORKS PROJECT #ES563
SURVEY CONTROL WORKSHEET

SURVEYOR'S NOTES:

1. **HORIZONTAL DATUM:** RELATED TO WASHINGTON COORDINATE SYSTEM (NAD83/98), NORTH ZONE

   BASIS OF BEARINGS: CITY OF BELLINGHAM EU-0190 (SEWER MAIN REPLACEMENT PROGRAM) SURVEY CONTROL PLAN

   LINE HELD: **S0°46'55"E 694.83'** BETWEEN FOUND BRASS DISKS (COB 1906 & 1387) IN THE CENTERLINE OF WOBURN ST., AS SHOWN.

   BASIS OF COORDINATES:

COB 1906 (#902)	BRASS DISK	N: 643722.45 E:1251542.62
COB 1387 (#905)	BRASS DISK	N: 643027.70 E:1251552.10

2. **VERTICAL DATUM:** NAVD88

   METHOD: CLOSED LOOP DIFFERENTIAL LEVELING

   PROJECT BENCHMARKS:

COB 5891 (#904)	BRASS DISK BM	EL=136.30' (HELD)
COB 1906 (#902)	BRASS DISK IN PVC	EL=99.77' (R=99.89')
COB 5867	LIGHT POLE BOLT	EL=170.67'

3. DATE OF SURVEY: **MARCH 21 & 22, 2023**

4. PROCEDURES USED IN THIS SURVEY MEET OR EXCEED STANDARDS SET FORTH BY WAC 332-130-145: TOPOGRAPHIC ELEMENTS ON MAPS.

5. THE PURPOSE OF THIS SURVEY WAS TO COLLECT TOPOGRAPHIC DATA WITHIN THE RIGHT OF WAY OF THE SCOPED AREA.

6. THIS SURVEY WAS ACCOMPLISHED USING STANDARD FIELD TRAVERSE PROCEDURES WITH A TOTAL STATION. VERTICAL CONTROL WAS ESTABLISHED USING CLOSED LOOP DIFFERENTIAL LEVELING. ALL MONUMENTS SHOWN WERE VISITED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.

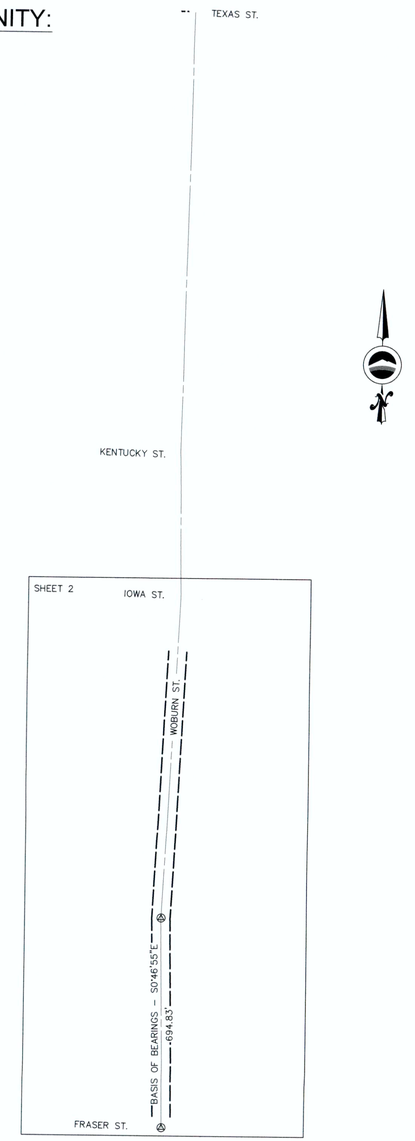
7. SURFACE CONTOURS DEPICTED WITH 1' (MINOR) AND 5' (MAJOR) INTERVALS WERE GENERATED FROM FIELD OBSERVATIONS USING AUTOCAD CIVIL 3D (VERSION 2019) AND ARE TYPICALLY ACCURATE TO WITHIN APPROXIMATELY 0.5'±.

8. JEPSON AND ASSOCIATES ASSUMES NO LIABILITY FOR ANY SUBSURFACE CONDITIONS OR FEATURES THAT MAY EXIST WHICH WERE UNDETECTABLE OR NOT VIABLE AT THE TIME OF THIS SURVEY AND THEREAFTER.

9. THIS IS NOT A BOUNDARY SURVEY AND IS NOT INTENDED TO BE USED AS SUCH, SEE A RECORD OF SURVEY OR PLAT MAP.

SHEET INDEX:

PROJECT VICINITY:



LEGEND:

△ SURVEY CONTROL
⊛ FOUND CENTERLINE MON.
BD BRASS DISK

CHRISTOPHER MICHAEL JEPSON
STATE OF WASHINGTON
55632
REGISTERED
PROFESSIONAL LAND SURVEYOR
5-02-23

Date	No	Revision	By
	4		
	3		
	2		
	1		

PROJECT ENGINEER
DESIGNED/DRAWN
INSPECTOR

DIRECTOR PUBLIC WORKS E.C.J.
CITY ENGINEER C.M.A.S.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 250'
Vert. N/A

DATUM
NAD 83/98
NAVD 88

Job. No. ES563
Date 05/02/2023
Field Bk. 1068-1

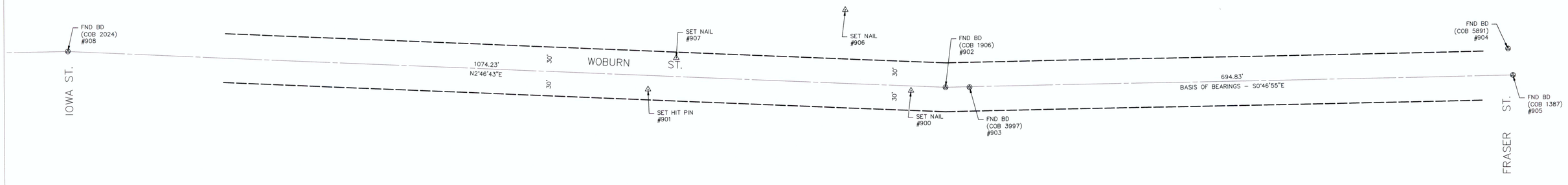
WEST SIDE NON-MOTORIZED IMPROVEMENTS
SURVEY CONTROL NORTHWEST AVE. & VICTOR ST.

SHEET 14 OF 45

SURVEY CONTROL MAP
WOBURN ST.

0 60 120
SCALE: 1" = 60'

SURVEY CONTROL TABLE				
Point #	Elevation	Northing	Easting	Description
900	97.51	643764.61	1251538.95	SET NAIL
901	82.88	644086.38	1251543.17	SET HIT PIN
902	99.77 (R=99.89)	643722.45	1251542.62	FND BRASS DISK (COB 1906)
903	101.28	643693.12	1251542.46	FND BRASS DISK (COB 3997)
904	136.30	643033.50	1251584.47	FND BRASS DISK (COB 5891)
905	136.27	643027.70	1251552.10	FND BRASS DISK (COB 1387)
906	–	643844.44	1251638.60	SET NAIL
907	–	644051.58	1251581.61	SET HIT PIN
908	–	644795.42	1251594.70	FND BRASS DISK (COB 2024) LS46896



CHRISTOPHER MICHAEL ZENOR
STATE OF WASHINGTON
55832
REGISTERED
PROFESSIONAL LAND SURVEYOR
05-02-23

Date	No	Revision	By
	4		
	3		
	2		
	1		

PROJECT ENGINEER
DESIGNED/DRAWN
INSPECTOR

DIRECTOR PUBLIC WORKS E.C.J.
CITY ENGINEER C.M.A.S.
ASSISTANT DIRECTOR M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

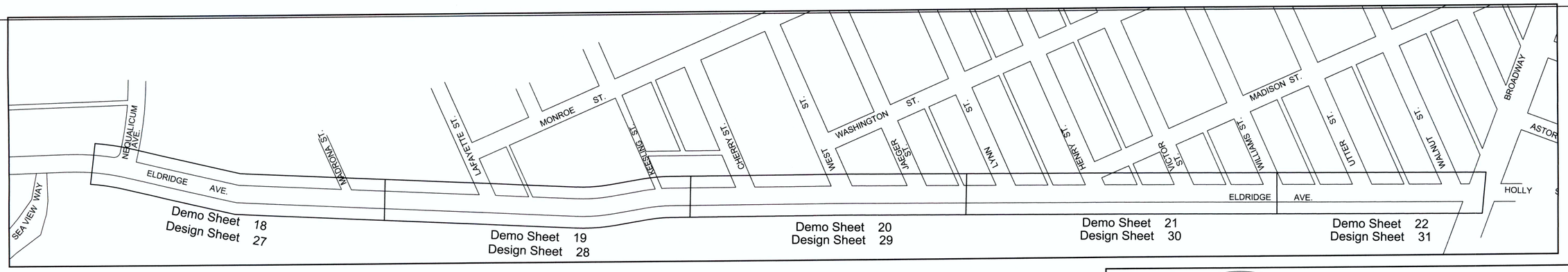
SCALE
Horiz. 1"= 60'
Vert. N/A

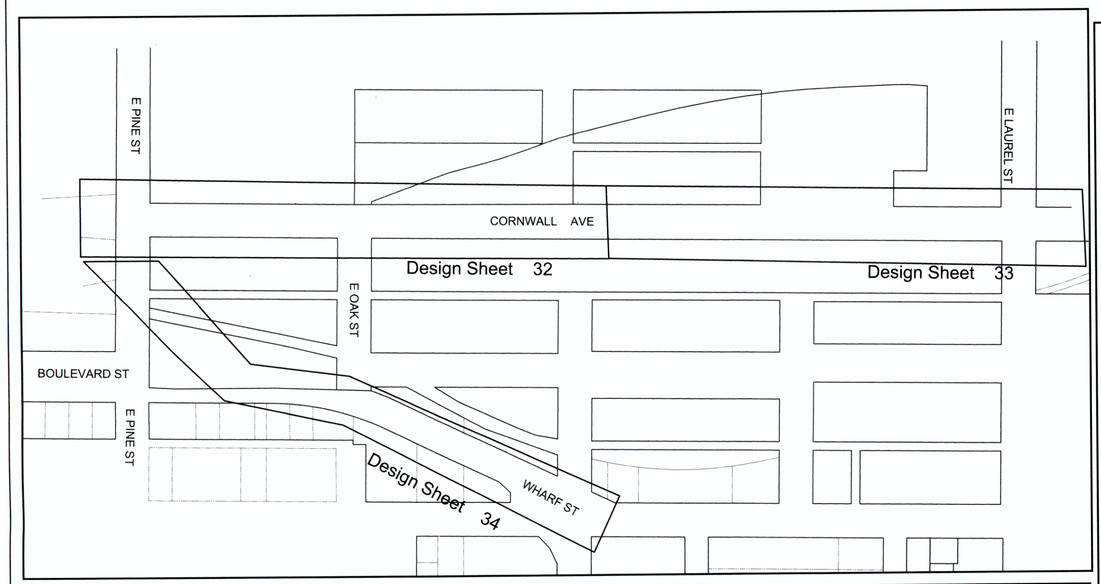
DATUM
NAD 83/98
NAVD 88

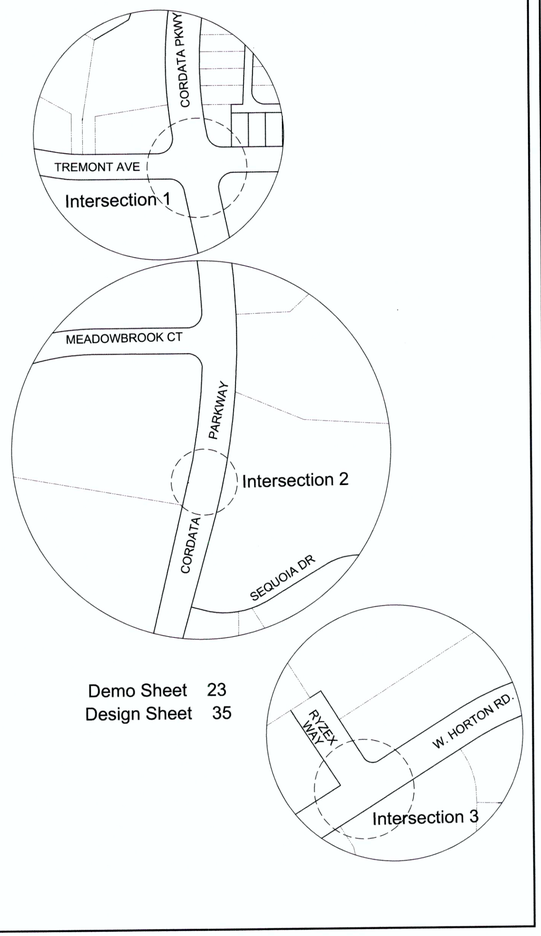
Job. No. ES563
Date 05/02/2023
Field Bk. 1068-1

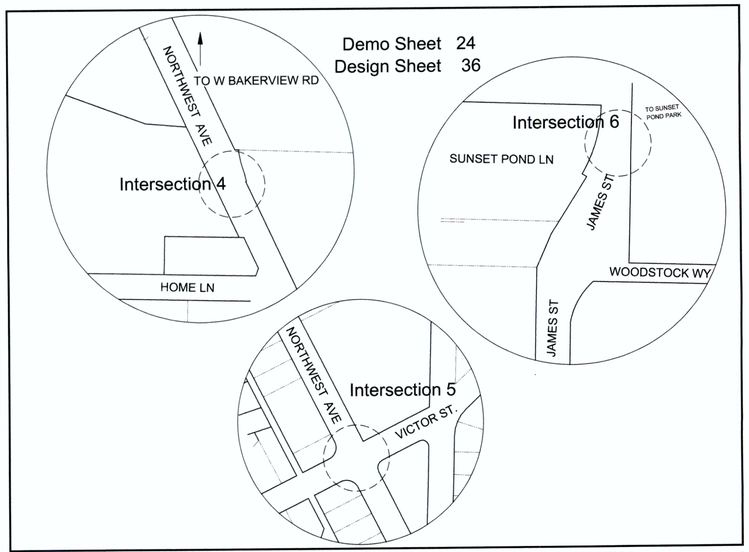
WEST SIDE NON-MOTORIZED IMPROVEMENTS
SURVEY CONTROL WOBURN ST

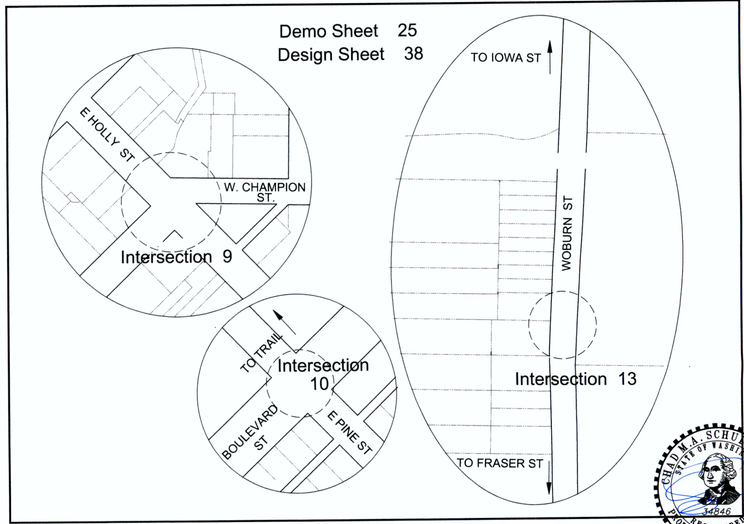
SHEET 15 OF 45

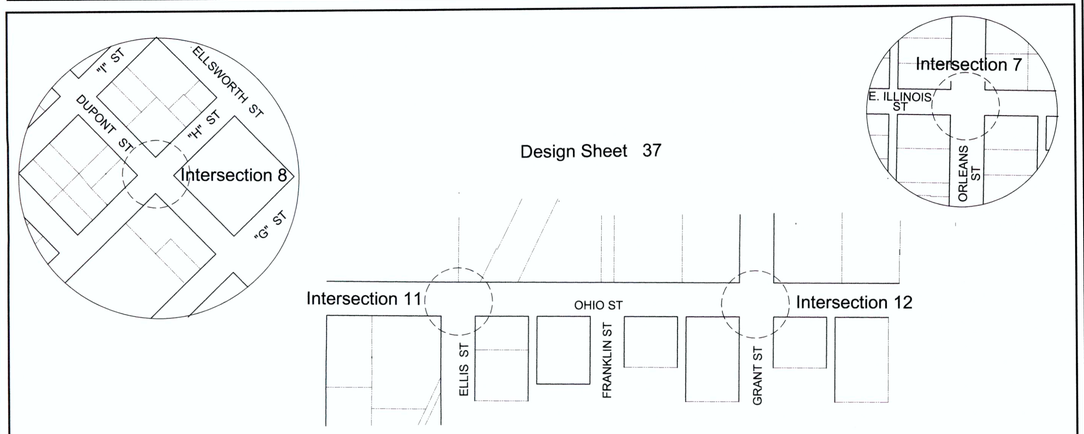












CHARLES A. SCHUMACHER
STATE OF WASHINGTON
14846
REGISTERED PROFESSIONAL ENGINEER

24 may 2023

Date	No	Revision	By
	4		
	3		
	2		
	1		

PROJECT ENGINEER JJB
DESIGNED/DRAWN ELH
INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.
CITY ENGINEER C.M.A.S.
OPERATIONS ENGINEER M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 20'
Vert. 1"= NA

DATUM
NAD 83/98
NAVD 88

Job. No. ES-0563
Date 02/2023
Field Bk. FB 1068-2

WEST SIDE NON-MOTORIZED IMPROVEMENTS
PROJECT SHEET MAP

SHEET 16 OF 45

CONTACT PERSON: JESSICA BENNETT, P.E. , PROJECT ENGINEER AT 778-7923

CONSTRUCTION STORMWATER POLLUTION PREVENTION (SWPPP) PLAN

THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION.

THE TESC FACILITIES SHOWN ON THE PLANS MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS.

THE TESC FACILITIES SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE TESC FACILITIES SHALL BE UPGRADED (E.G., ADDITIONAL SUMPS, RELOCATION OF DITCHES AND SILT FENCES, ETC.) AS NEEDED FOR UNEXPECTED STORM EVENTS.

THE TESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.

AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.

WHERE SEEDING FOR TEMPORARY EROSION CONTROL IS REQUIRED, FAST GERMINATING GRASSES SHALL BE APPLIED AT AN APPROPRIATE RATE (E.G., ANNUAL OR PERENNIAL RYE APPLIED AT APPROXIMATELY 80 POUNDS PER ACRE).

WHERE STRAW MULCH FOR TEMPORARY EROSION CONTROL IS REQUIRED, IT SHALL BE APPLIED AT A MINIMUM THICKNESS OF TWO INCHES.

SLURRY AND PROCESS WATER RESULTING FROM SAW CUTTING AND ASPHALT COLD-PLANING SHALL BE COLLECTED AND DISPOSED OF IN A MANNER THAT DOES NOT VIOLATE GROUNDWATER OR SURFACE WATER QUALITY PER DOE BMP C151 AND BMP C152: CONCRETE HANDLING AND SAW CUTTING AND SURFACE POLLUTION PREVENTION RESPECTIVELY.

PROCESS WATER THAT IS GENERATED DURING HYDRO-DEMOLITION, SURFACE ROUGHENING, OR SIMILAR OPERATIONS SHALL NOT DRAIN TO ANY NATURAL OR CONSTRUCTED DRAINAGE CONVEYANCE AND SHALL BE DISPOSED OF IN A MANNER THAT DOES NOT VIOLATE GROUND WATER OR SURFACE WATER QUALITY STANDARDS

EROSION/SEDIMENTATION CONTROL FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS IN THESE PLANS. LOCATIONS MAYBE MOVED TO SUIT FIELD CONDITIONS, SUBJECT TO APPROVAL BY THE ENGINEER AND THE CITY INSPECTOR.

CONSTRUCTION STORMWATER POLLUTION PREVENTION ELEMENTS 1-13

ELEMENT 1: PRESERVE VEGETATION/MARK CLEARING LIMITS

1. PRIOR TO BEGINNING LAND DISTURBING ACTIVITIES (INCLUDING CLEARING AND GRADING) CLEARLY MARK ALL CLEARING LIMITS AND TREES THAT ARE TO BE PRESERVED WITHIN THE CONSTRUCTION AREA AS SHOWN ON THE DRAWINGS.
2. SILT FENCE, GEOTEXTILE ENCASED BARRIERS, CONSTRUCTION FENCE, ORANGE PLASTIC FENCE, OR OTHER APPROVED MEASURES MAY BE USED TO MARK THE CLEARING LIMITS IN ADDITION TO THE CONSTRUCTION FENCING SHOWN ON THE PLAN.
3. THE DUFF LAYER, NATIVE TOPSOIL, AND NATURAL VEGETATION SHALL BE RETAINED IN AN UNDISTURBED STATE TO THE MAXIMUM DEGREE PRACTICABLE.

SUGGESTED BMP's/BMP's TO BE USED:
* BMP C101: PRESERVING NATURAL VEGETATION
* BMP C103: HIGH VISIBILITY PLASTIC OR METAL FENCE

ELEMENT 2: ESTABLISH CONSTRUCTION ACCESS

IT IS ANTICIPATED THAT ALL CONSTRUCTION TRAFFIC TO BE ON PAVED SURFACES, HOWEVER IF ANY SEDIMENT IS TRACKED ONTO PUBLIC ROADS, THEY SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY, OR MORE FREQUENTLY DURING WET WEATHER. SEDIMENT SHALL BE REMOVED FROM ROADS BY SHOVELING OR PICKUP SWEEPING AND SHALL BE TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.

SUGGESTED BMP's/BMP's TO BE USED:
* BMP C107: CONSTRUCTION ROAD/PARKING AREA STABILIZATION

ELEMENT 3: CONTROL FLOW RATES

PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM EROSION DUE TO INCREASES IN THE VELOCITY AND PEAK VOLUMETRIC FLOW RATE OF STORMWATER RUNOFF FROM THE PROJECT SITE.

SUGGESTED BMP's/BMP's TO BE USED:
* BMP C240: SEDIMENT TRAP

ELEMENT 4: INSTALL SEDIMENT CONTROLS

1. THE DUFF LAYER, NATIVE SOIL, AND NATURAL VEGETATION SHALL BE RETAINED IN AN UNDISTURBED STATE TO THE MAXIMUM EXTENT PRACTICABLE.
2. SEDIMENT CONTROL BMP'S SHALL BE CONSTRUCTED AS ONE OF THE FIRST STEPS IN GRADING. THESE BMP'S SHALL BE FUNCTIONAL BEFORE OTHER LAND DISTURBING ACTIVITIES TAKE PLACE.
3. PRIOR TO LEAVING THE CONSTRUCTION SITE, STORMWATER RUNOFF FROM DISTURBED AREAS SHALL PASS THROUGH AN APPROPRIATE SEDIMENT REMOVAL BMP'S. RUNOFF FROM FULL STABILIZED AREAS MAY BE DISCHARGED WITHOUT A SEDIMENT REMOVAL BMP, BUT MUST MEET PERFORMANCE STANDARDS OF CONTROL FLOW RATES.

SUGGESTED BMP's/BMP's TO BE USED:
* BMP C208: TRIANGULAR SILT DIKE
* BMP C231: BRUSH BARRIER
* BMP C232: GRAVEL FILTER BERMS
* BMP C233: SILT FENCE
* BMP C234: VEGETATED STRIP
* BMP C235: STRAW WATTLES
* BMP C240: SEDIMENT TRAP
* BMP C251: CONSTRUCTION STORMWATER FILTRATION (SCREEN, BAG, OR FIBER FILTERS)

ELEMENT 5: STABILIZE SOILS

1. EXPOSED AND UNWORKED SOILS SHALL BE STABILIZED BY APPLICATION OF EFFECTIVE BMP'S THAT PROTECT THE SOIL FROM EROSIVE FORCES OF RAINDROPS, FLOWING WATER, AND WIND.
2. TO PREVENT EROSION, NO SOILS SHALL REMAIN EXPOSED AND UNWORKED FOR MORE THAN THE TIME PERIODS SET FORTH BELOW:
* DURING THE WET SEASON (OCTOBER 1-APRIL 30): 2 DAYS
* DURING THE DRY SEASON (MAY 1-SEPT. 30): 7 DAYS
THIS STABILIZATION REQUIREMENT APPLIES TO ALL SOILS ON SITE, WHETHER AT FINAL GRADE OR NOT. THESE TIMES MAY BE ADJUSTED BY THE LOCAL PERMITTING AUTHORITY IF IT CAN BE SHOWN THAT SITE CONDITIONS OR THE AVERAGE TIME BETWEEN STORM EVENTS JUSTIFIES A DIFFERENT STANDARD.
3. SOILS SHALL BE STABILIZED AT THE END OF THE SHIFT BEFORE A HOLIDAY OR WEEKEND IF NEEDED BASED ON THE WEATHER FORECAST.
4. SOIL STOCKPILES SHALL BE STABILIZED FROM EROSION, PROTECTED WITH SEDIMENT TRAPPING MEASURES, AND WHERE POSSIBLE, BE LOCATED AWAY FROM STORM DRAIN INLETS, WATERWAYS, AND DRAINAGE CHANNELS.
5. APPLICABLE BMP'S INCLUDE, BUT ARE NOT LIMITED TO: TEMPORARY AND PERMANENT SEEDING, SODDING, MULCHING, PLASTIC COVERING, EROSION CONTROL FABRICS AND MATTING, THE EARLY APPLICATION OF GRAVEL BASE ON AREAS TO BE PAVED AND DUST CONTROL. SELECT SOIL STABILIZATION MEASURES SHALL BE APPROPRIATE FOR THE TIME OF YEAR, SITE CONDITIONS, ESTIMATED DURATION OF USE, AND THE POTENTIAL WATER QUALITY IMPACTS.
6. REMOVE ALL TESC MEASURES AS SOON AS PRACTICAL AFTER ESTABLISHMENT OF UNIFORM GRASS GROWTH OR INSTALLATION OF OTHER PERMANENT STABILIZATION MEASURES. REPAIR ANY DAMAGE TO STABILIZED SURFACES AFTER REMOVAL OF TESC MEASURES.

SUGGESTED BMP's/BMP's TO BE USED:
* BMP C120: TEMPORARY AND PERMANENT SEEDING
* BMP C121: MULCHING
* BMP C124: SODDING
* BMP C140: DUST CONTROL

ELEMENT 6: PROTECT SLOPES

1. DESIGN, CONSTRUCT, AND PHASE CUT AND FILL SLOPES IN A MANNER THAT WILL MINIMIZE EROSION. APPLICABLE PRACTICES INCLUDE, BUT ARE NOT LIMITED TO, REDUCING CONTINUOUS LENGTH OF SLOPE WITH TERRACING AND DIVERSIONS REDUCING SLOPE STEEPNESS, AND ROUGHENING SLOPE SURFACES (E.G., TRACK WALKING).
2. OFF-SITE STORMWATER RUNOFF OR GROUNDWATER SHALL BE DIVERTED AWAY FROM SLOPES AND DISTURBED AREAS WITH INTERCEPTOR DIKES, PIPES, AND OR SWALES. OFF-SITE STORMWATER SHOULD BE MANAGED SEPARATELY FROM STORMWATER GENERATED ON THE SITE.

SUGGESTED BMP's/BMP's TO BE USED:
* BMP C126: NETS AND BLANKETS
* BMP C123: PLASTIC COVERING
* BMP C130: SURFACE ROUGHENING

ELEMENT 7: PROTECT DRAIN INLETS

ALL STORM DRAIN INLETS OPERABLE DURING CONSTRUCTION AND ALL INLETS WITHIN 200' DOWNSTREAM OF THE PROJECT SITE SHALL BE PROTECTED WITH CATCH BASIN FILTERS SO THAT STORMWATER RUNOFF DOES NOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR TREATED TO REMOVE SEDIMENT. CATCH BASIN FILTERS IN THE ROADWAY WILL BE OIL/SEDIMENT FILTERS AND CATCH BASIN FILTERS OUTSIDE OF THE ROADWAY WILL BE SEDIMENT FILTERS.

SUGGESTED BMP's/BMP's TO BE USED
* BMP C260: STORM DRAIN INLET PROTECTION

ELEMENT 8: STABILIZE CHANNELS AND OUTLETS:

1. ALL TEMPORARY ON-SITE CONVEYANCE CHANNELS SHALL BE DESIGNED, CONSTRUCTED AND STABILIZED TO PREVENT EROSION FROM THE EXPECTED PEAK 10 MINUTE VELOCITY OF FLOW FROM A TYPE 1A, 10-YEAR, 24-HOUR FREQUENCY STORM FOR THE DEVELOPED CONDITION. ALTERNATIVELY, THE 10-YEAR, 1-HOUR FLOW RATE INDICATED BY AN APPROVED CONTINUOUS RUNOFF MODEL, CREASED BY A FACTOR OF 1.6, MAY BE USED.
2. STABILIZATION, INCLUDING ARMORING MATERIAL, ADEQUATE TO PREVENT EROSION OF OUTLETS, ADJACENT STREAM BANKS, SLOPES AND DOWNSTREAM REACHES SHALL BE PROVIDED AT THE OUTLETS OF ALL CONVEYANCE SYSTEMS.

SUGGESTED BMP's/BMP's TO BE USED
* BMP C209: OUTLET PROTECTION

ELEMENT 9: CONTROL POLLUTANTS

1. ALL POLLUTANTS, INCLUDING WASTE MATERIALS AND DEMOLITION DEBRIS, THAT OCCUR ON SITE SHALL BE HANDLED AND DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORMWATER.
2. COVER, CONTAINMENT, AND PROTECTION FROM VANDALISM SHALL BE PROVIDED FOR ALL CHEMICALS, LIQUID PRODUCTS, PETROLEUM PRODUCTS, AND OTHER MATERIALS THAT HAVE THE POTENTIAL TO POSE A THREAT TO HUMAN HEALTH OR THE ENVIRONMENT. ON-SITE FUELING TANKS SHALL INCLUDE SECONDARY CONTAINMENT.
3. MAINTENANCE, FUELING, AND REPAIR OF HEAVY EQUIPMENT AND VEHICLES SHALL BE CONDUCTED USING SPILL PREVENTION AND CONTROL MEASURES. CONTAMINATED SURFACES SHALL BE CLEANED IMMEDIATELY FOLLOWING ANY SPILL INCIDENT.
4. BMP'S SHALL BE USED TO PREVENT OR TREAT CONTAMINATION OF STORMWATER RUNOFF BY PH MODIFYING SOURCES. THESE SOURCES INCLUDE, BUT ARE NOT LIMITED TO: BULK CEMENT, CEMENT KILN DUST, FLY ASH, NEW CONCRETE WASHING AND CURING WATERS, WASTE STREAMS GENERATED FROM CONCRETE GRINDING AND SAWING, EXPOSED AGGREGATE PROCESSES, AND CONCRETE PUMPING AND MIXER WASHOUT WATERS. PERMITTEES SHALL ADJUST THE PH OF STORMWATER IF NECESSARY TO PREVENT VIOLATIONS OF WATER QUALITY STANDARDS.

SUGGESTED BMP's/BMP's TO BE USED:
* BMP C151: CONCRETE HANDLING

* BMP C151: CONCRETE HANDLING
* BMP C152: SAWCUTTING AND SURFACING POLLUTION PREVENTION
* BMP C153: MATERIAL DELIVERY, STORAGE AND CONTAINMENT

ELEMENT 10: CONTROL DEWATERING

1. FOUNDATION, VAULT, AND TRENCH DE-WATERING WATER, WHICH HAVE SIMILAR CHARACTERISTICS TO STORMWATER RUNOFF AT THE SITE, SHALL BE DISCHARGED INTO A CONTROLLED CONVEYANCE SYSTEM PRIOR TO DISCHARGE TO A SEDIMENT TRAP OF SEDIMENT POND.
2. CLEAN, NON-TURBID DE-WATERING WATER, SUCH AS WELL-POINT GROUND WATER, CAN BE DISCHARGED TO SYSTEMS TRIBUTARY TO, OR DIRECTLY INTO SURFACE WATERS OF THE STATE, AS SPECIFIED IN ELEMENT #8, PROVIDED THE DE-WATERING FLOW DOES NOT CAUSE EROSION OR FLOODING OF RECEIVING WATERS. CLEAN DE-WATERING WATER SHOULD NOT BE ROUTED THROUGH STORMWATER SEDIMENT PONDS.
3. OTHER DE-WATERING DISPOSAL OPTIONS MAY INCLUDE:
* INFILTRATION.
* TRANSPORT OFF SITE IN A VEHICLE, SUCH AS A VACUUM FLUSH TRUCK, FOR LEGAL DISPOSAL IN A MANNER THAT DOES NOT POLLUTE STATE WATERS.
* ECOLOGY APPROVED ON-SITE CHEMICAL TREATMENT OR OTHER SUITABLE TREATMENT TECHNOLOGIES.
* SANITARY SEWER DISCHARGE WITH LOCAL SEWER DISTRICT APPROVAL, IF THERE IS NO OTHER OPTION.
* USE OF A SEDIMENTATION BAG (DIRTBAG OR APPROVED EQUAL) WITH OUTFALL TO A DITCH OR SWALE FOR SMALL VOLUMES OF LOCALIZED DE-WATERING.
4. HIGHLY TURBID, CONTAMINATED DEWATERING WATER FROM CONSTRUCTION EQUIPMENT OPERATION, CLAMSHELL DIGGING, CONCRETE TREMIE POUR, OR WORK INSIDE A COFFERDAM SHALL BE HANDLED SEPARATELY FROM STORMWATER.

SUGGESTED BMP's/BMP's TO BE USED:
* BMP C205: SUBSURFACE DRAINS

ELEMENT 11: MAINTAIN BMP's

WHEN SEDIMENT ACCUMULATION IN SEDIMENTATION STRUCTURES, OTHER THAN INLET PROTECTION DEVICES, HAS REACHED A POINT ONE-THIRD DEPTH OF SEDIMENT STRUCTURE OR DEVICE, OR IF FLOW THROUGH THE DEVICE IS REDUCED BY MORE THAN ONE-THIRD CAPACITY, THE CONTRACTOR SHALL REMOVE AND REPLACE DISPOSABLE DEVICES OR CLEAN AND DISPOSE OF SEDIMENT.

TEMPORARY EROSION AND SEDIMENT CONTROL BMP'S SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY BMP'S ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE REMOVED OR STABILIZED ON SITE. DISTURBED SOILS SHALL BE PERMANENTLY STABILIZED.

SUGGESTED BMP's/BMP's TO BE USED:
* BMP C150: MATERIALS ON HAND

ELEMENT 12: MANAGE THE PROJECT

SEASONAL WORK LIMITATIONS FROM OCTOBER 1 THROUGH APRIL 30, CLEARING, GRADING, AND OTHER SOIL DISTURBING ACTIVITIES SHALL ONLY BE PERMITTED IF SHOWN TO THE SATISFACTION OF THE LOCAL PERMITTING AUTHORITY THAT THE TRANSPORT OF SEDIMENT FROM THE CONSTRUCTION SITE TO RECEIVING WATERS WILL BE PREVENTED THROUGH A COMBINATION OF THE FOLLOWING:
A) SITE CONDITIONS INCLUDING EXISTING VEGETATIVE COVERAGE, SLOPE, SOIL TYPE AND PROXIMITY TO RECEIVING WATERS; AND
B) LIMITATIONS ON ACTIVITIES AND THE EXTENT OF DISTURBED AREAS; AND
C) PROPOSED EROSION AND SEDIMENT CONTROL MEASURES.

THE CONTRACTOR WILL DESIGNATE A CONTRACTOR EROSION AND SPILL CONTROL LEAD (CESCL) WHO WILL BE RESPONSIBLE FOR INSPECTING, MAINTAINING AND ARRANGING FOR REPAIRS TO BE MADE TO BMP'S TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION.

BASED ON THE INFORMATION PROVIDED AND LOCAL WEATHER CONDITIONS, THE LOCAL PERMITTING AUTHORITY MAY EXPAND OR RESTRICT THE SEASONAL LIMITATION ON SITE DISTURBANCE. THE LOCAL PERMITTING AUTHORITY SHALL TAKE ENFORCEMENT ACTION—SUCH AS NOTICE OF VIOLATION, ADMINISTRATIVE ORDER, PENALTY OR STOP-WORK ORDER—UNDER THE FOLLOWING CIRCUMSTANCES:

* IF, DURING THE COURSE OF ANY CONSTRUCTION ACTIVITY OR SOIL DISTURBANCE DURING THE SEASONAL LIMITATION PERIOD, SEDIMENT LEAVES THE CONSTRUCTION SITE CAUSING A VIOLATION OF THE SURFACE WATER QUALITY STANDARD
OR
* IF CLEARING AND GRADING LIMITS OR EROSION AND SEDIMENT CONTROLS MEASURES SHOWN IN THE APPROVED PLAN ARE NOT MAINTAINED.

SUGGESTED BMP's/BMP's TO BE USED:
* BMP C160: CERTIFIED EROSION AND SEDIMENT CONTROL LEAD
* BMP C162: SCHEDULING

ELEMENT 13: PROTECT LOW IMPACT DEVELOPMENT BMP'S

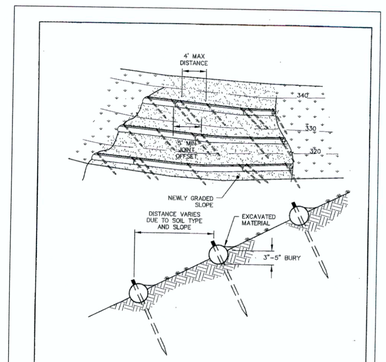
1) CONTRACTOR SHALL PROTECT ALL BIORETENTIONS AND RAIN GARDEN FACILITIES FROM SEDIMENTATION THROUGH INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENT CONTROL BMPS ON PORTIONS OF THE SITE THAT DRAIN INTO THE BIORETENTION AND/OR RAIN GARDEN FACILITIES. RESTORE THE FACILITIES TO THEIR FULLY FUNCTIONING CONDITION IF THEY ACCUMULATE SEDIMENT DURING CONSTRUCTION. RESTORING THE FACILITY MUST INCLUDE REMOVAL OF SEDIMENTS AND ANY SEDIMENT-LADEN BIORETENTION GARDEN SOILS, AND REPLACING THE REMOVED SOILS WITH SOILS MEETING THE DESIGN SPECIFICATION.

2) CONTRACTOR SHALL MAINTAIN THE INFILTRATION CAPABILITIES OF BIORETENTION AND RAIN GARDEN FACILITIES BY PROTECTING AGAINST COMPACTION BY CONSTRUCTION EQUIPMENT AND FOOT TRAFFIC. PROTECT COMPLETED LAWN AND LANDSCAPED AREAS FROM COMPACTION DUE TO CONSTRUCTION EQUIPMENT.

3) CONTRACTOR SHALL CONTROL EROSION AND AVOID INTRODUCING SEDIMENT FROM SURROUNDING LAND USES ONTO PERMEABLE PAVEMENTS. DO NOT ALLOW MUDDY CONSTRUCTION EQUIPMENT ON THE BASE MATERIAL OR PAVEMENT. DO NOT ALLOW SEDIMENT-LADEN RUNOFF ONTO PERMEABLE PAVEMENTS.

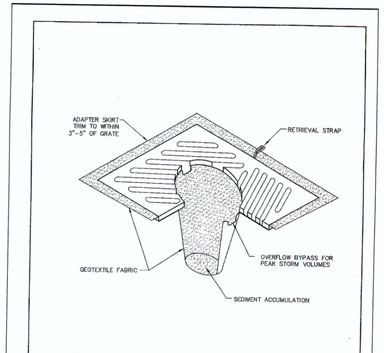
4) CONTRACTOR SHALL CLEAN PERMEABLE PAVEMENTS FOULED WITH SEDIMENTS OR NO LONGER PASSING AN INITIAL INFILTRATION TEST USING LOCAL STORMWATER MANUAL METHODOLOGY OR THE MANUFACTURERS PROCEDURES.

5) CONTRACTOR SHALL KEEP ALL HEAVY EQUIPMENT OFF EXISTING SOILS UNDER LID FACILITIES THAT HAVE BEEN EXCAVATED TO FINAL GRADE TO RETAIN THE INFILTRATION RATE OF THE SOILS.



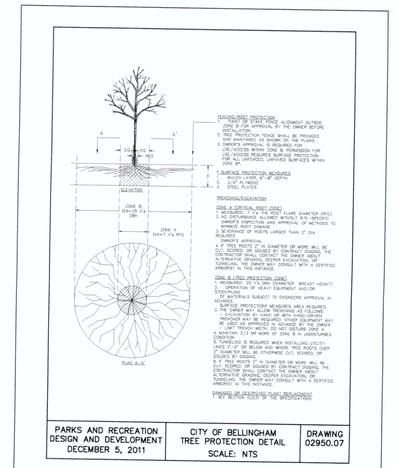
NOTES:
1. JOINTS MUST BE OFFSET BY NO LESS THAN FIVE FEET.
2. ROLLS SHALL BE ALIGNED PARALLEL TO ELEVATION CONTOURS.
3. HYDROSEED OR MULCH SLOPE FOR ADDITIONAL EROSION CONTROL.

APPROVED City Engineer	Date	CITY OF BELLINGHAM	DRAWING
	11/29/04	STRAW ROLLS	EC-655



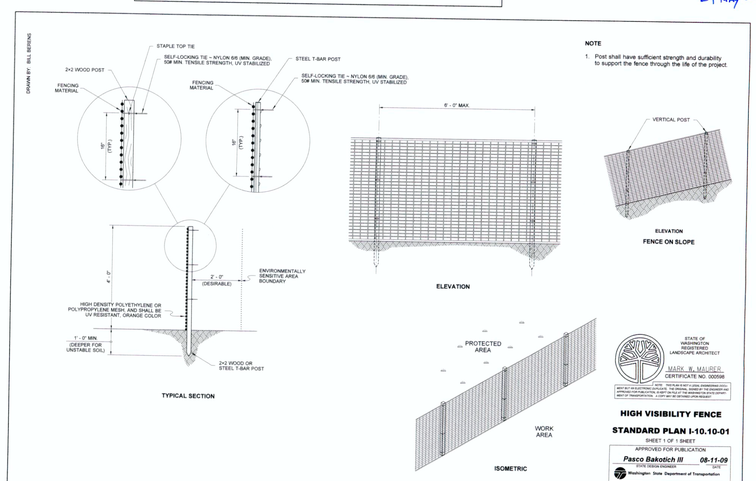
NOTES:
1. INSERT SHALL BE INSTALLED PRIOR TO CLEARING AND GRADING ACTIVITY, OR UPON PLACEMENT OF A NEW CATCH BASIN.
2. SEDIMENT SHALL BE REMOVED FROM THE UNIT WHEN IT BECOMES HALF FULL.
3. SEDIMENT REMOVAL SHALL BE ACCOMPLISHED BY REMOVING THE INSERT, EMPTYING, AND RE-INSERTING IT INTO THE CATCH BASIN.

APPROVED City Engineer	Date	CITY OF BELLINGHAM	DRAWING
	11/29/04	CATCH BASIN INSERT	EC-620



PARKS AND RECREATION DESIGN AND DEVELOPMENT DECEMBER 5, 2011	CITY OF BELLINGHAM TREE PROTECTION DETAIL SCALE: NTS	DRAWING 02950.07

CHAD A. SCHULLAKER — STATE OF WASHINGTON — 24846 — REGISTERED PROFESSIONAL ENGINEER
24 MAY 2023



NOTE
1. Post shall have sufficient strength and durability to support the fence through the life of the project.

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT — MARK W. MAURER — CERTIFICATE NO. 000598

HIGH VISIBILITY FENCE

STANDARD PLAN I-10.10-01

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Pasco Bakotich III — 08-11-09
DOUG SWAN ENGINEER — DATE
Washington State Department of Transportation

	4			PROJECT ENGINEER JJB	DIRECTOR OF PUBLIC WORKS E.C.J.
	3			DESIGNED/DRAWN ELH	CITY ENGINEER C.M.A.S.
	2			INSPECTOR DJK	OPERATIONS ENGINEER M.A.O.
	1				
Date	No	Revision	By		

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE: Horiz. 1"= 20' Vert. 1"= NA

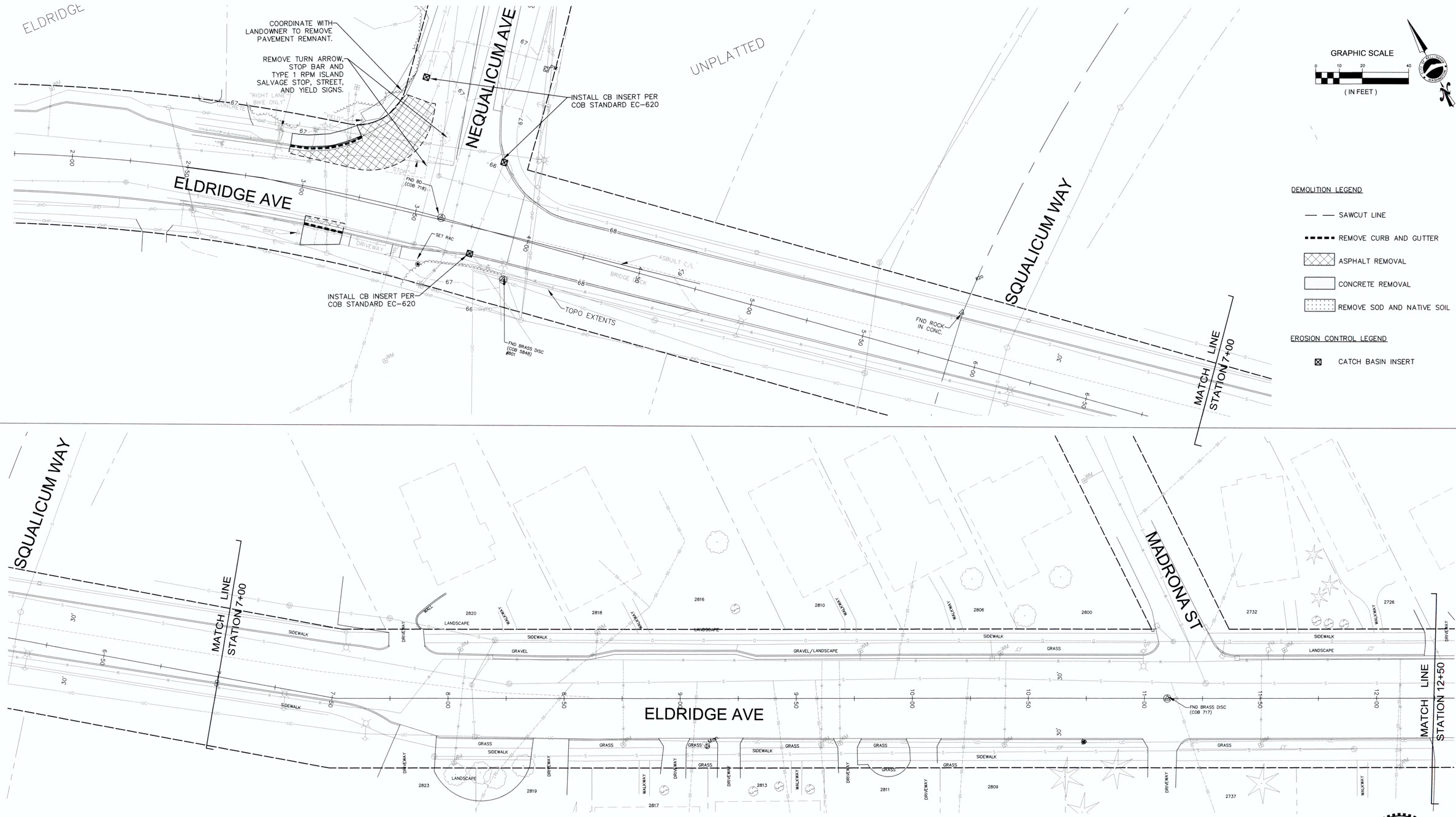
DATUM: NAD 83/98 NAVD 88

Job. No. ES-0563 Date 02/2023 Field Bk. FB 1068-2

WEST SIDE NON-MOTORIZED IMPROVEMENTS
STORMWATER POLLUTION PREVENTION PLAN NOTES

SHEET 17 OF 45

CONTACT PERSON: JESSICA BENNETT , P.E. , PROJECT ENGINEER AT 778-7923



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Date	No	Revision	By

PROJECT ENGINEER JJB
DESIGNED/DRAWN ELH
INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.
CITY ENGINEER C.M.A.S.
OPERATIONS ENGINEER M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 20'
Vert. 1"= NA

DATUM
NAD 83/98
NAVD 88

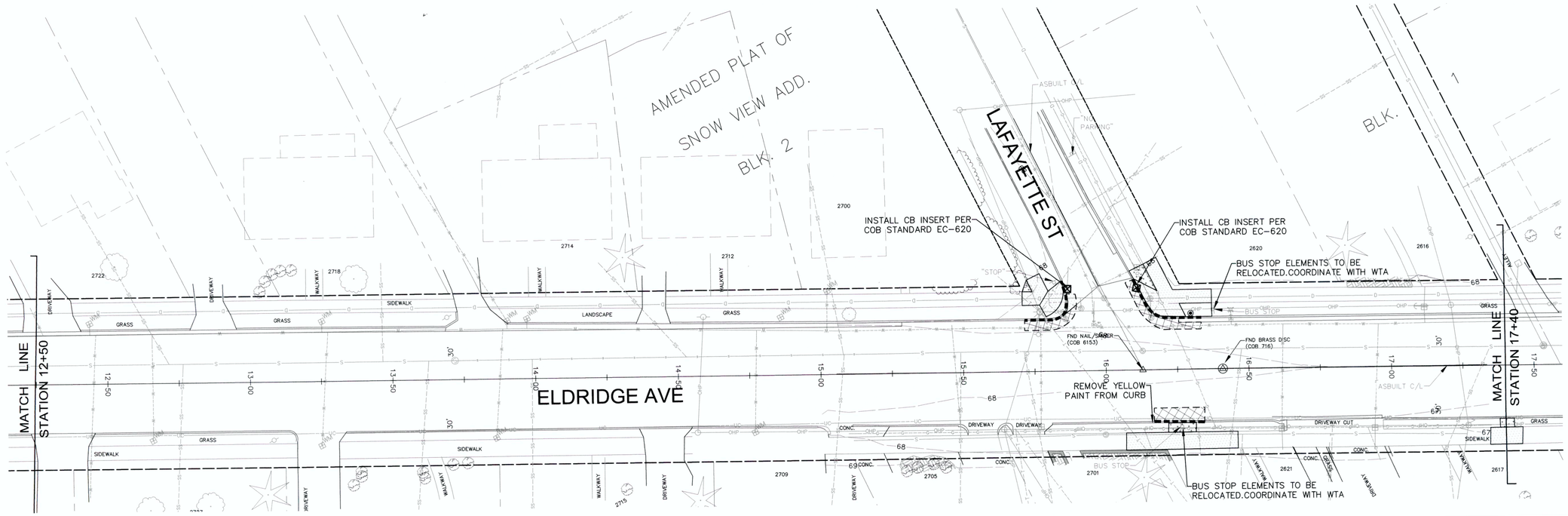
Job. No. ES-0563
Date 02/2023
Field Bk. FB 1068-2

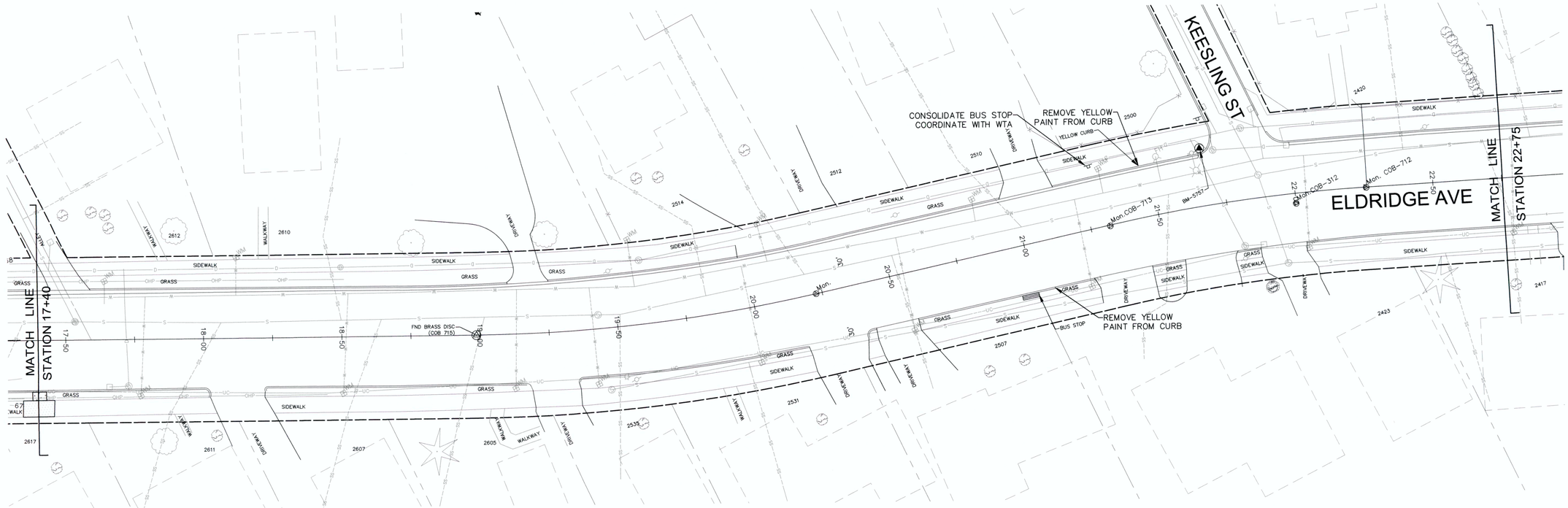
WEST SIDE NON-MOTORIZED IMPROVEMENTS
DEMO & TESC PLAN ELDRIDGE AVE. STA: 2+50 to 12+50

SHEET 18 OF 45

CHAD M.A. SCHULTHEIS — STATE OF WASHINGTON — 34646 — REGISTERED PROFESSIONAL ENGINEER
24 MAY 2023

CONTACT PERSON: JESSICA BENNETT, P.E. , PROJECT ENGINEER AT 778-7923





CHAD A. SCHULLAUER
STATE OF WASHINGTON
34846
REGISTERED PROFESSIONAL ENGINEER
24 May 2023

Date	No	Revision	By
	4		
	3		
	2		
	1		

PROJECT ENGINEER JJB
DESIGNED/DRAWN ELH
INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.
CITY ENGINEER C.M.A.S.
OPERATIONS ENGINEER M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 20'
Vert. 1"= NA

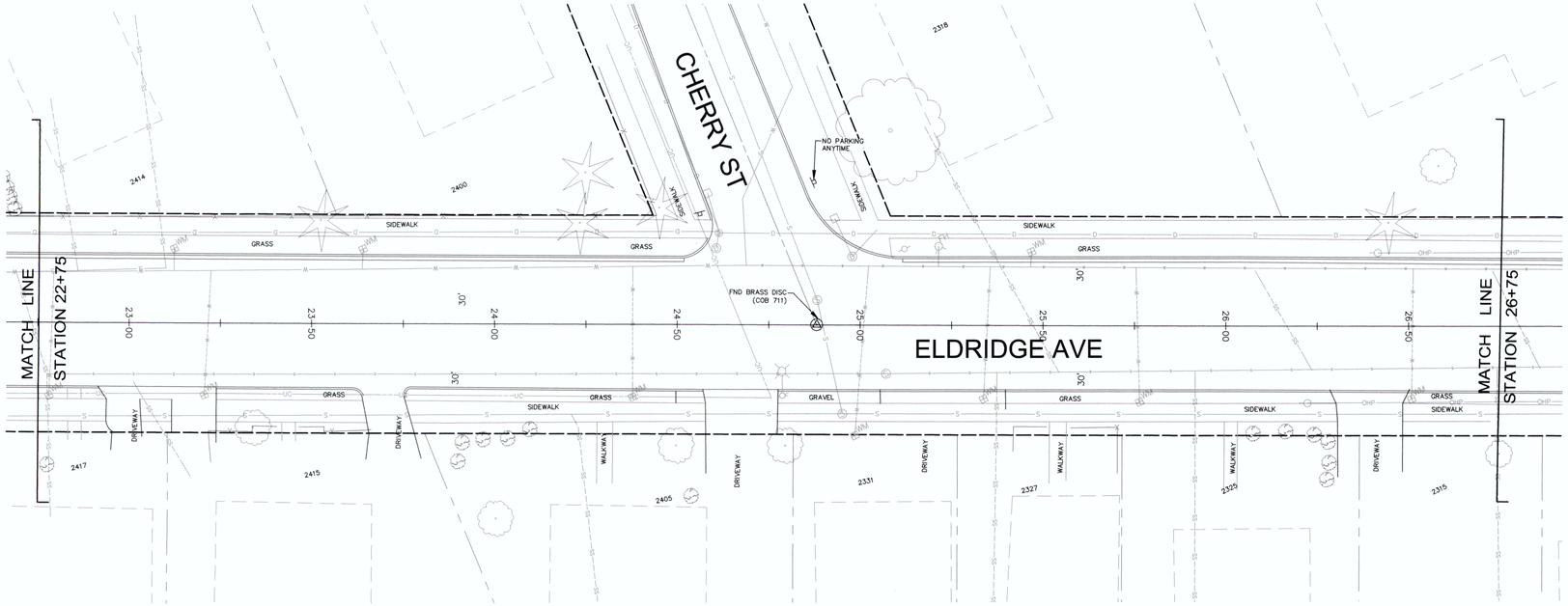
DATUM
NAD 83/98
NAVD 88

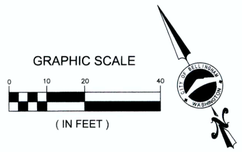
Job. No. ES-0563
Date 02/2023
Field Bk. FB 1068-2

WEST SIDE NON-MOTORIZED IMPROVEMENTS
DEMO & TESC PLAN ELDRIDGE AVE. STA: 12+50 to 22+75

SHEET 19 OF 45

CONTACT PERSON: JESSICA BENNETT, P.E. , PROJECT ENGINEER AT 778-7923



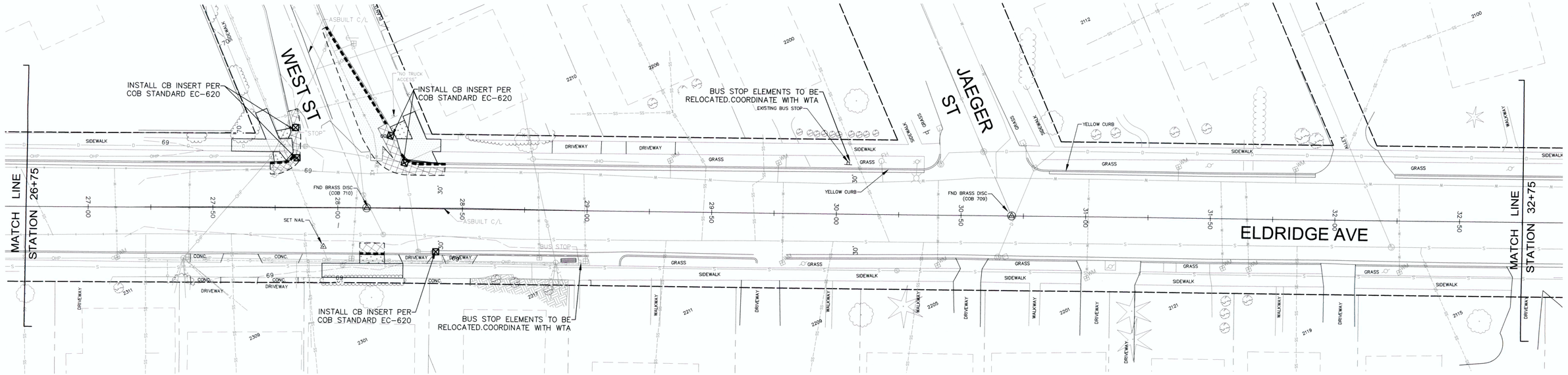


DEMOLITION LEGEND

- —— —— SAWCUT LINE
- ▬▬▬ REMOVE CURB AND GUTTER
- ASPHALT REMOVAL
- CONCRETE REMOVAL
- REMOVE SOD AND NATIVE SOIL

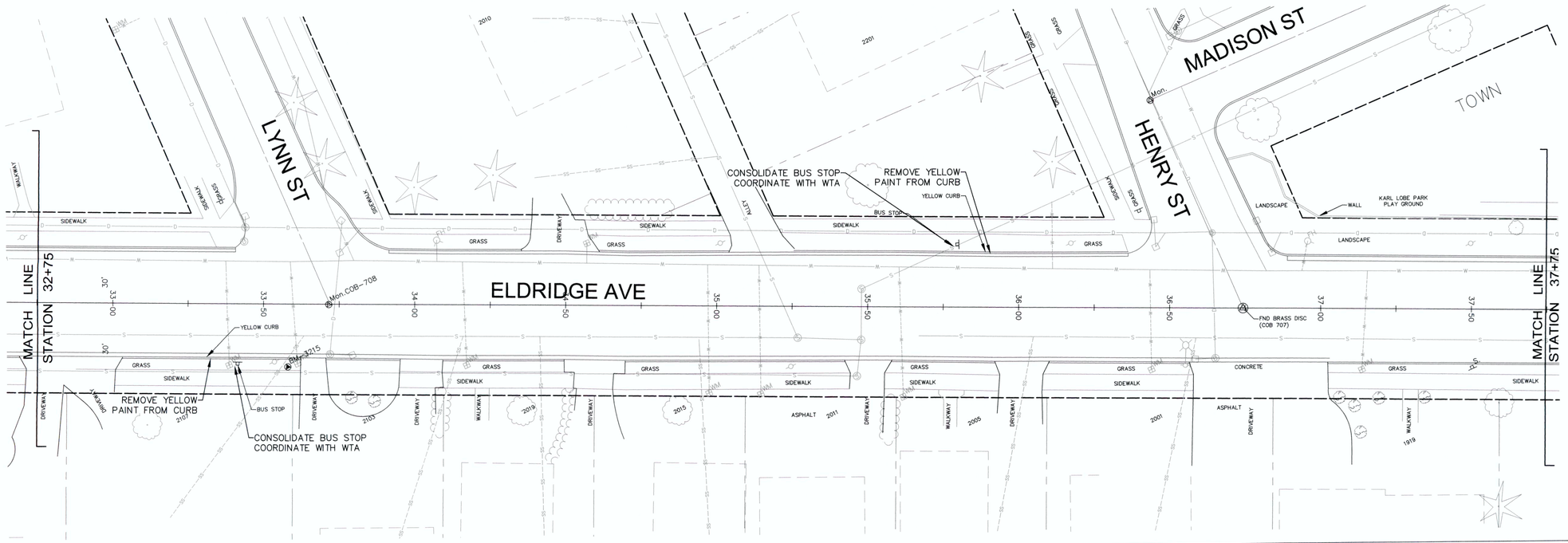
EROSION CONTROL LEGEND

- ⊠ CATCH BASIN INSERT



	4		PROJECT ENGINEER JJB	DIRECTOR OF PUBLIC WORKS E.C.J.	CITY OF BELLINGHAM, WASHINGTON	SCALE	DATUM	Job. No. ES-0563	WEST SIDE NON-MOTORIZED IMPROVEMENTS	SHEET
	3		DESIGNED/DRAWN ELH	CITY ENGINEER C.M.A.S.	PUBLIC WORKS DEPARTMENT	Horiz. 1"= 20'	NAD 83/98	Date 02/2023	DEMO & TESC PLAN ELDRIDGE AVE. STA: 22+75 to 32+75	20 OF 45
	2		INSPECTOR DJK	OPERATIONS ENGINEER M.A.O.	ENGINEERING DIVISION	Vert. 1"= NA	NAVD 88	Field Bk. FB 1068-2		
Date	No	Revision By								

CONTACT PERSON: JESSICA BENNETT, P.E. , PROJECT ENGINEER AT 778-7923



GRAPHIC SCALE

0 10 20 40

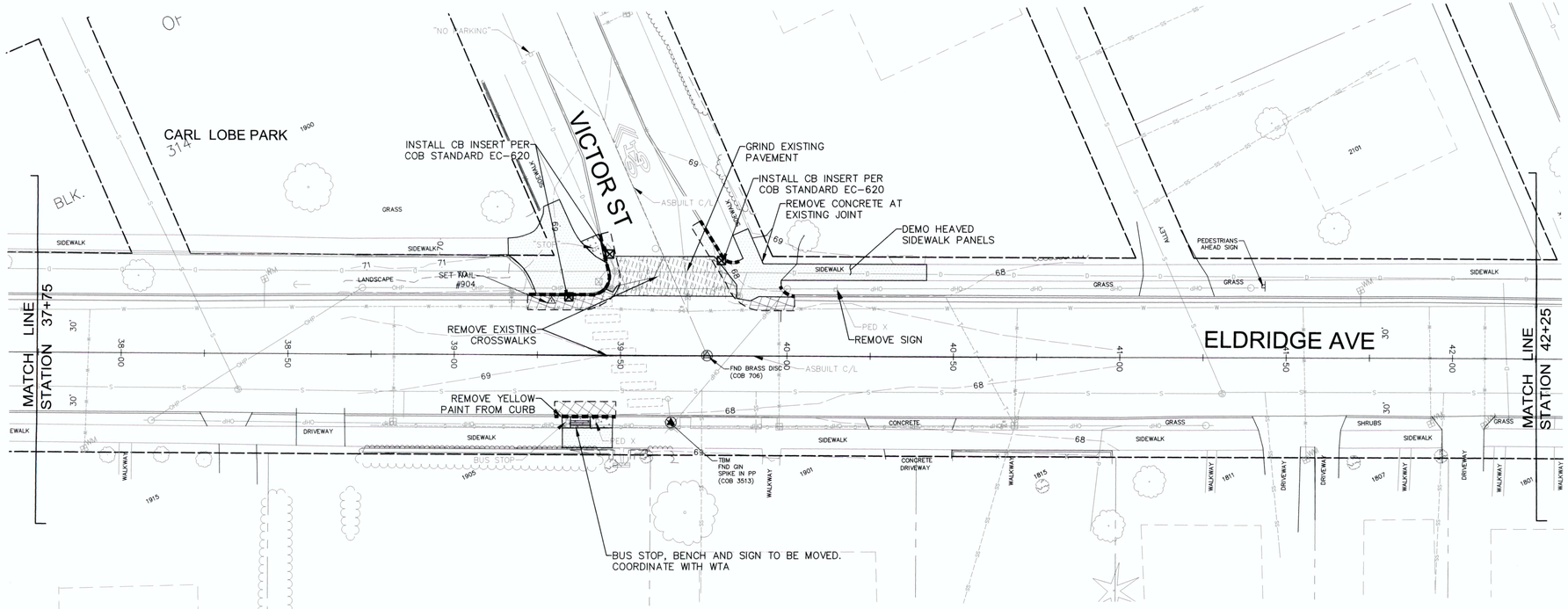
(IN FEET)

DEMOLITION LEGEND

- SAWCUT LINE
- REMOVE CURB AND GUTTER
- ASPHALT REMOVAL
- CONCRETE REMOVAL
- REMOVE SOD AND NATIVE SOIL

EROSION CONTROL LEGEND

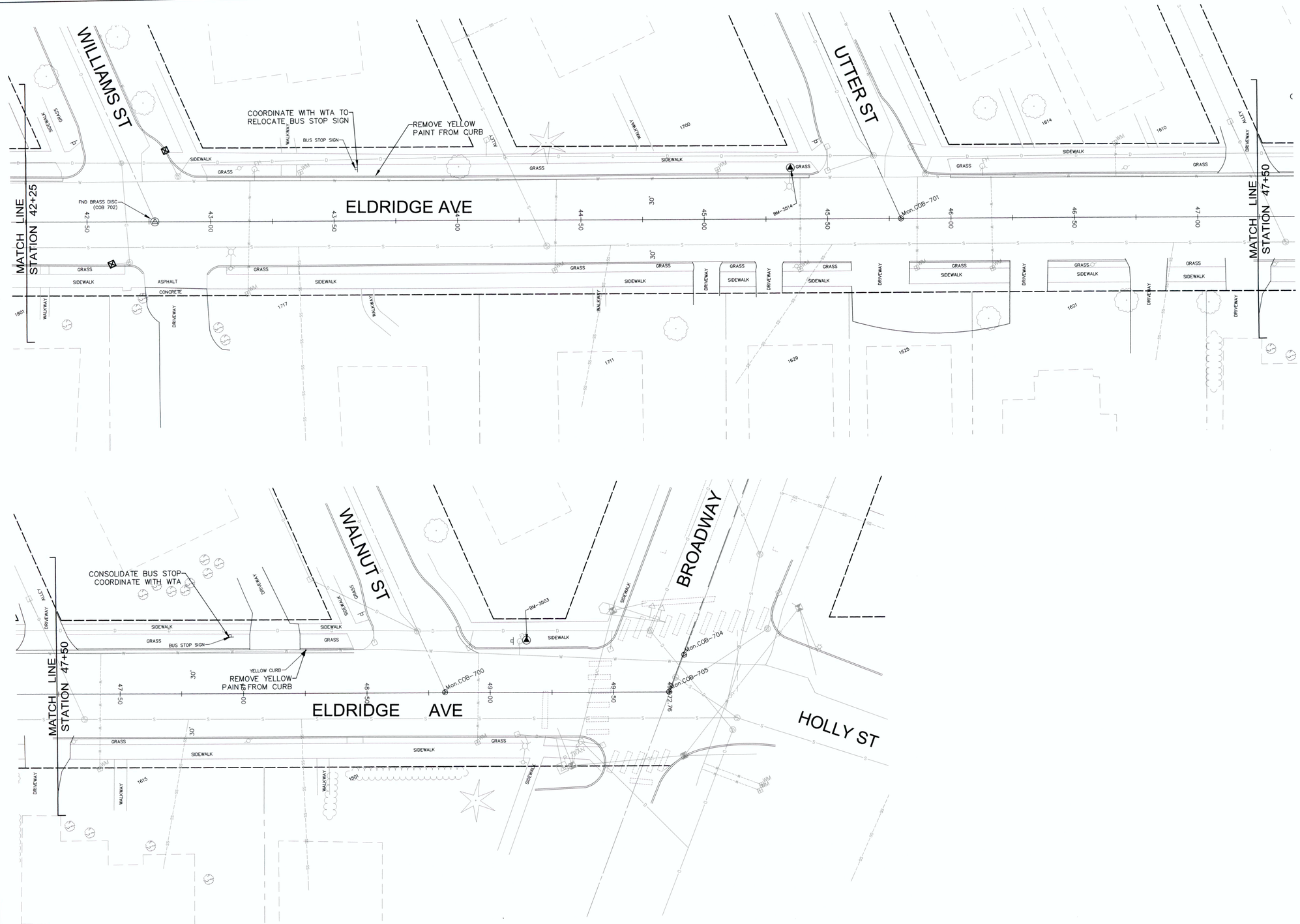
- CATCH BASIN INSERT



24 may 2023

4		PROJECT ENGINEER JJB	DIRECTOR OF PUBLIC WORKS E.C.J.	CITY OF BELLINGHAM, WASHINGTON	SCALE	DATUM	Job. No. ES-0563	WEST SIDE NON-MOTORIZED IMPROVEMENTS	SHEET 21 OF 45
3		DESIGNED/DRAWN ELH	CITY ENGINEER C.M.A.S.	PUBLIC WORKS DEPARTMENT	Horiz. 1"= 20'	NAD 83/98	Date 02/2023	DEMO & TESC PLAN ELDRIDGE AVE. STA: 32+75 to 42+25	
2		INSPECTOR DJK	OPERATIONS ENGINEER M.A.O.	ENGINEERING DIVISION	Vert. 1"= NA	NAVD 88	Field Bk. FB 1068-2		
1									
Date	No Revision By								

CONTACT PERSON: JESSICA BENNETT, P.E. , PROJECT ENGINEER AT 778-7923



DEMOLITION LEGEND

- —— —— SAWCUT LINE
- ▬▬▬ REMOVE CURB AND GUTTER
- ▨ ASPHALT REMOVAL
- ▩ CONCRETE REMOVAL
- ⁘ REMOVE SOD AND NATIVE SOIL

EROSION CONTROL LEGEND

- ⊠ CATCH BASIN INSERT

JOANNA SCHULTHAISER
STATE OF WASHINGTON
14846
REGISTERED PROFESSIONAL ENGINEER
24 MAY 2023

No	Date	Revision	By
4			
3			
2			
1			

PROJECT ENGINEER JJB
DESIGNED/DRAWN ELH
INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.
CITY ENGINEER C.M.A.S.
OPERATIONS ENGINEER M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 20'
Vert. 1"= NA

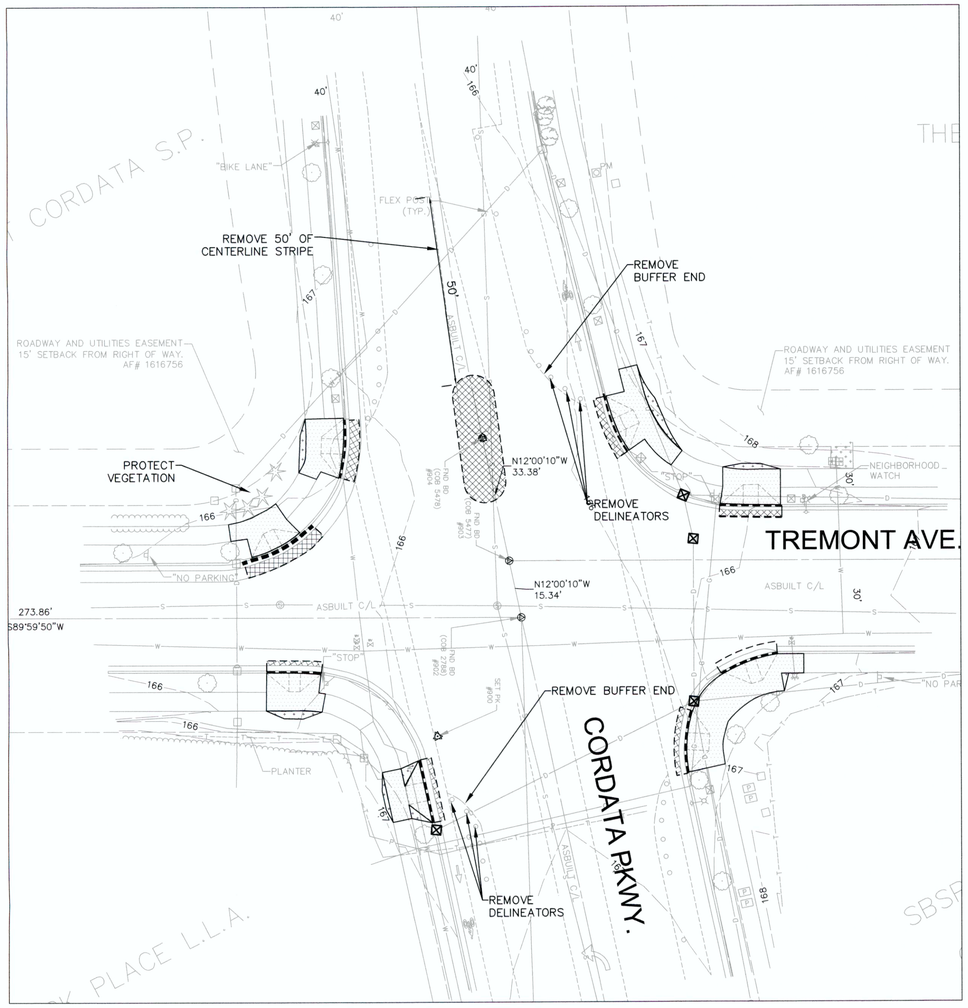
DATUM
NAD 83/98
NAVD 88

Job. No. ES-0563
Date 02/2023
Field Bk. FB 1068-2

WEST SIDE NON-MOTORIZED IMPROVEMENTS
DEMO & TESC PLAN ELDRIDGE AVE. STA: 42+25 to 50+00

SHEET 22 OF 45

CONTACT PERSON: JESSICA BENNETT, P.E. , PROJECT ENGINEER AT 778-7923



GRAPHIC SCALE

0 10 20 40

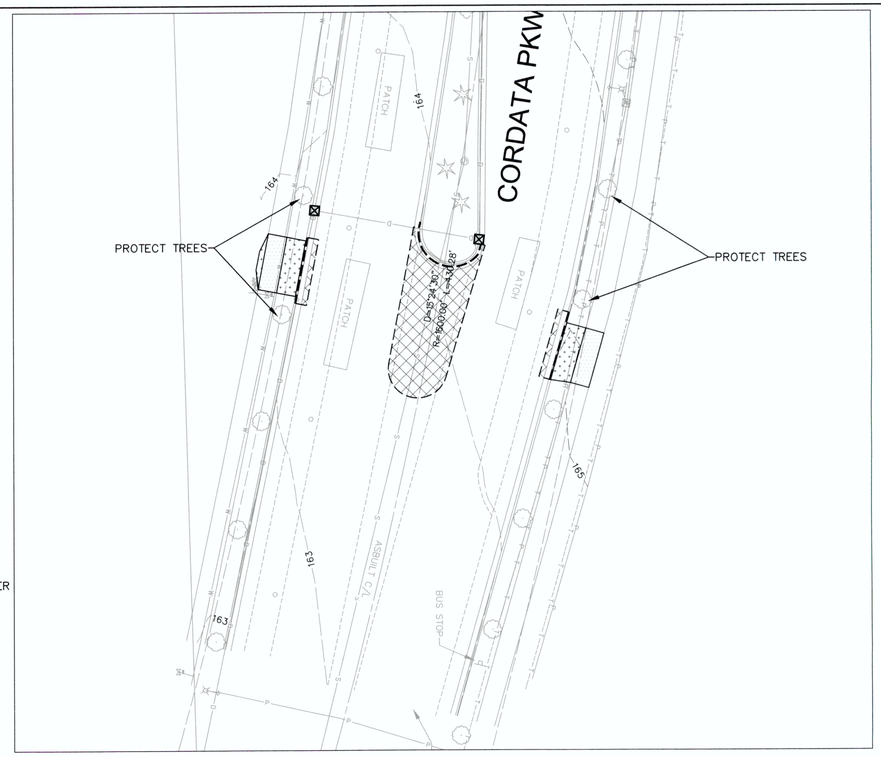
(IN FEET)

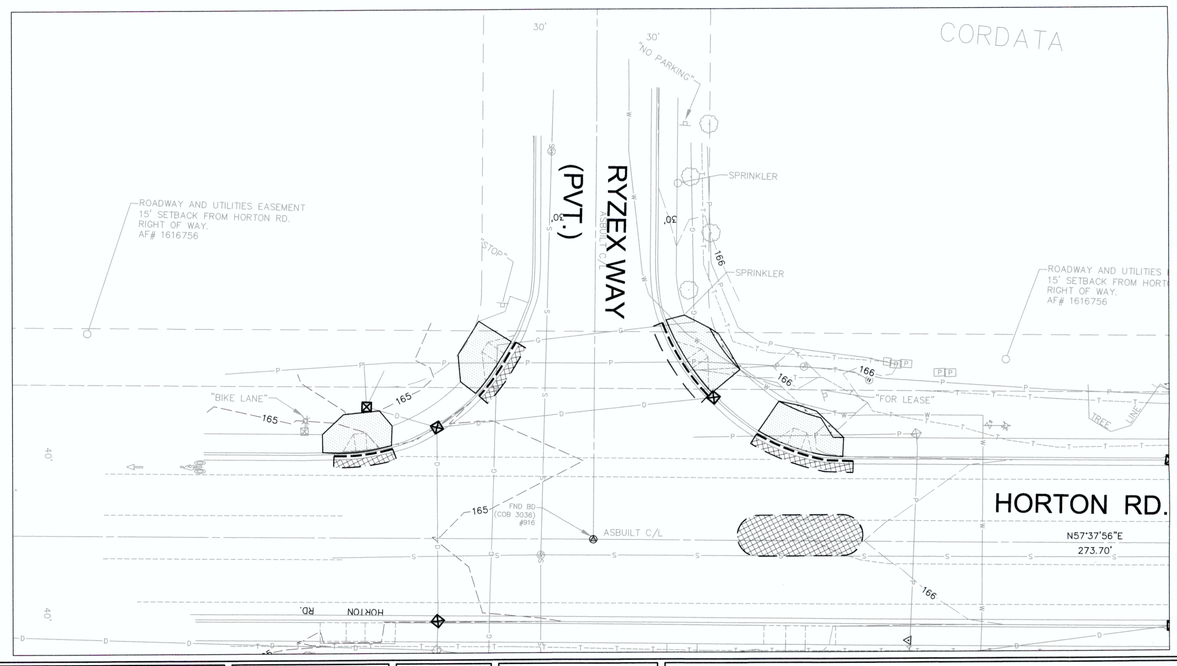
DEMOLITION LEGEND

- SAWCUT LINE
- REMOVE CURB AND GUTTER
- ASPHALT REMOVAL
- CONCRETE REMOVAL
- CLEARING AND GRUBBING

EROSION CONTROL LEGEND

- CATCH BASIN INSERT



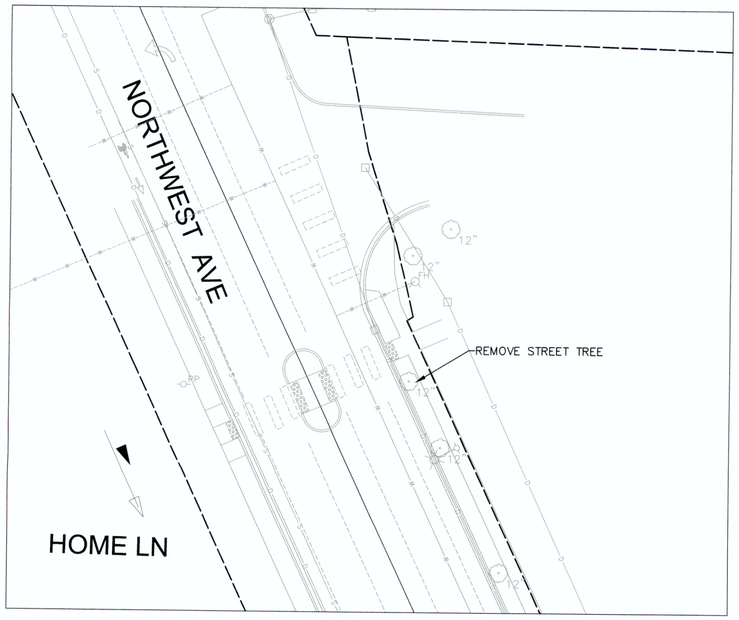


	4			PROJECT ENGINEER JJB	DIRECTOR OF PUBLIC WORKS E.C.J.	CITY OF BELLINGHAM, WASHINGTON	SCALE	DATUM	Job. No. ES-0563	WEST SIDE NON-MOTORIZED IMPROVEMENTS	SHEET 23 OF 45
	3			DESIGNED/DRAWN ELH	CITY ENGINEER C.A.M.S.	PUBLIC WORKS DEPARTMENT	Horiz. 1"= 20'	NAD 83/98	Date 02/2023	DEMO AND SWPPP INTERSECTIONS 1, 2, 3	
	2			INSPECTOR DJK	OPERATIONS ENGINEER M.A.O.	ENGINEERING DIVISION	Vert. 1"= NA	NAVD 88	Field Bk. FB 1068-2		
	1										
Date	No	Revision	By								

CONTACT PERSON: JESSICA BENNETT, P.E. , PROJECT ENGINEER AT 778-7923

EDWARD M. SCHULHAUSER STATE OF WASHINGTON 14846 REGISTERED PROFESSIONAL ENGINEER

24 May 2023



GRAPHIC SCALE

0 10 20 40

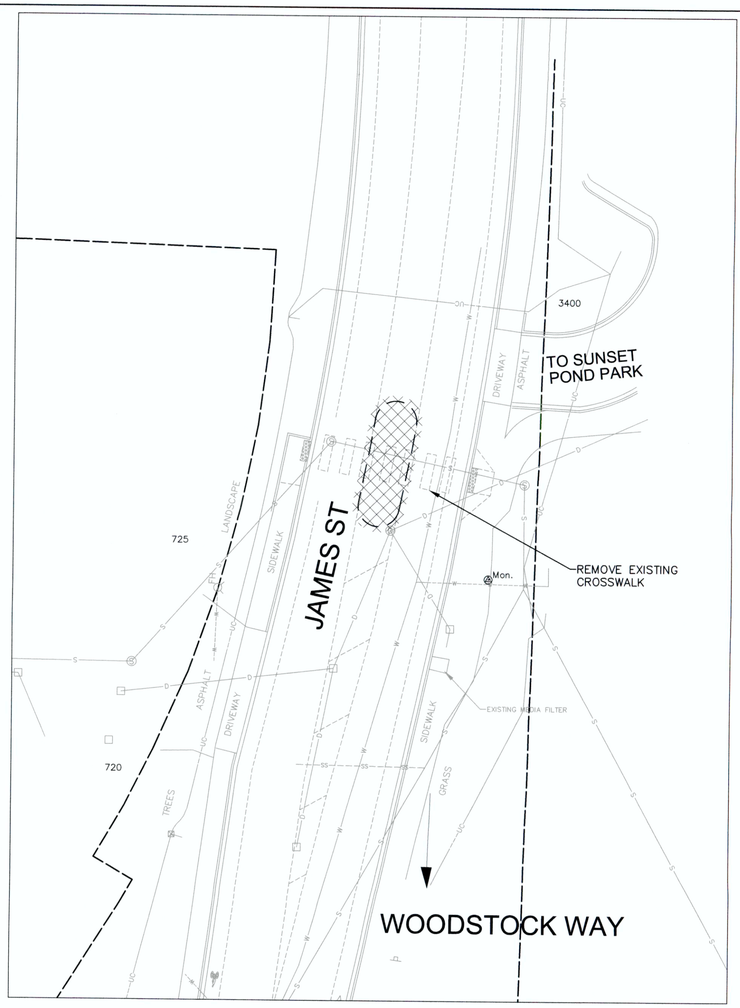
(IN FEET)

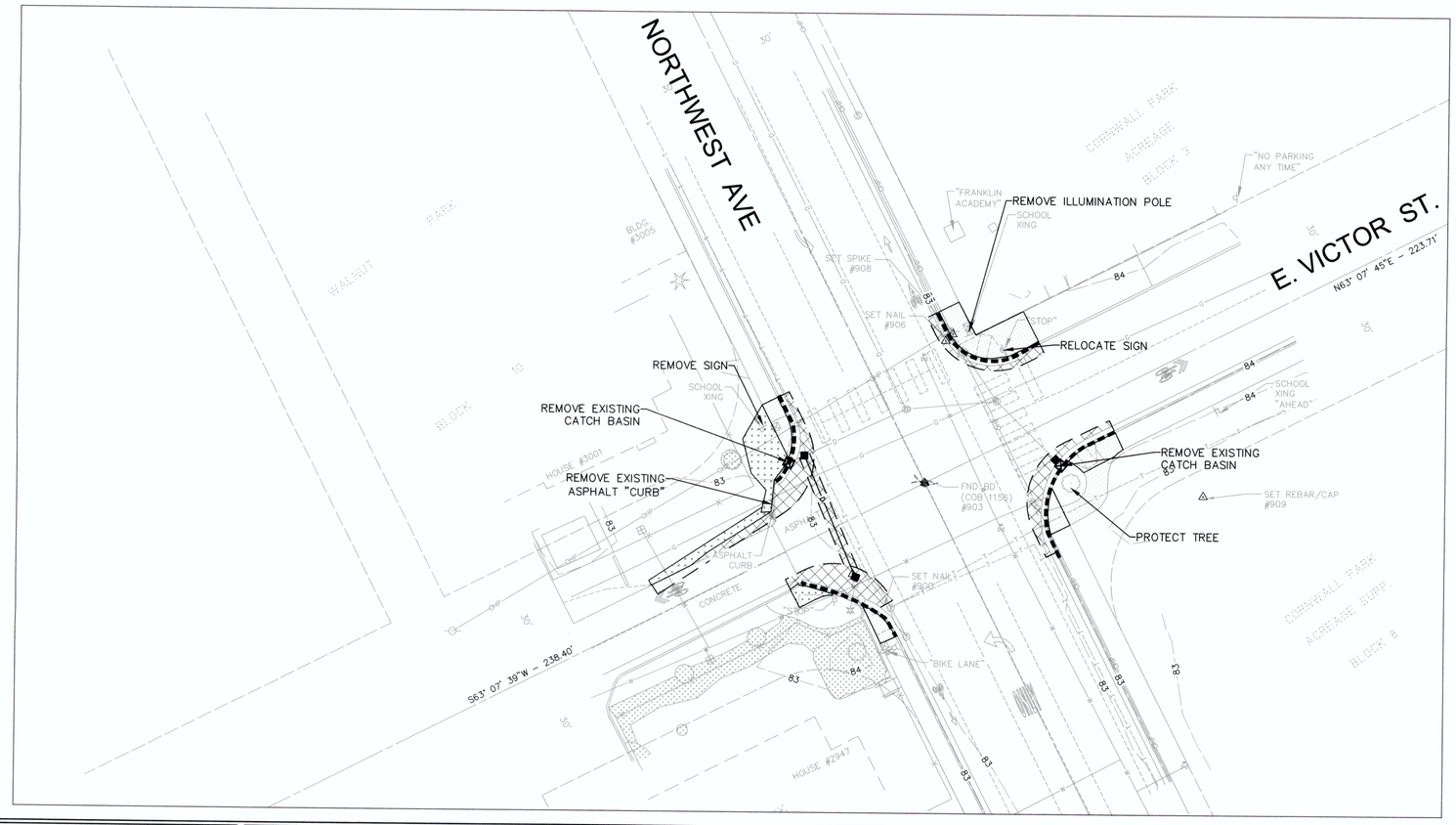
DEMOLITION LEGEND

- SAWCUT LINE
- REMOVE CURB AND GUTTER
- ASPHALT REMOVAL
- CONCRETE REMOVAL
- CLEARING AND GRUBBING

EROSION CONTROL LEGEND

- CATCH BASIN INSERT





CARLOS A. SCHULHAUSER — STATE OF WASHINGTON — 34846 — REGISTERED PROFESSIONAL ENGINEER

24 MAY 2023

No	Date	Revision	By
4			
3			
2			
1			

PROJECT ENGINEER JJB
DESIGNED/DRAWN ELH
INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.
CITY ENGINEER C.A.M.S.
OPERATIONS ENGINEER M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 20'
Vert. 1"= NA

DATUM
NAD 83/98
NAVD 88

Job. No. ES-0563
Date 02/2023
Field Bk. FB 1068-2

WEST SIDE NON-MOTORIZED IMPROVEMENTS
DEMO & TESC INTERSECTIONS 4, 5, & 6

SHEET 24 OF 45

CONTACT PERSON: JESSICA BENNETT, P.E. , PROJECT ENGINEER AT 778-7923

GRAPHIC SCALE

0 10 20 40

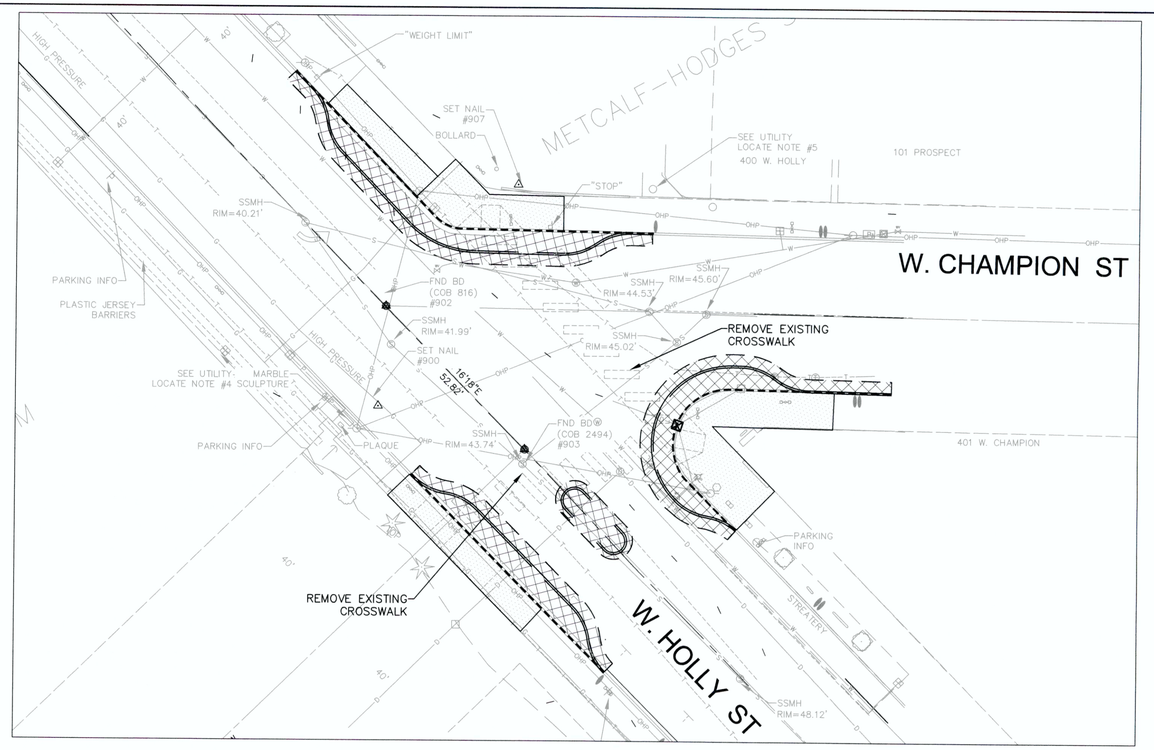
(IN FEET)

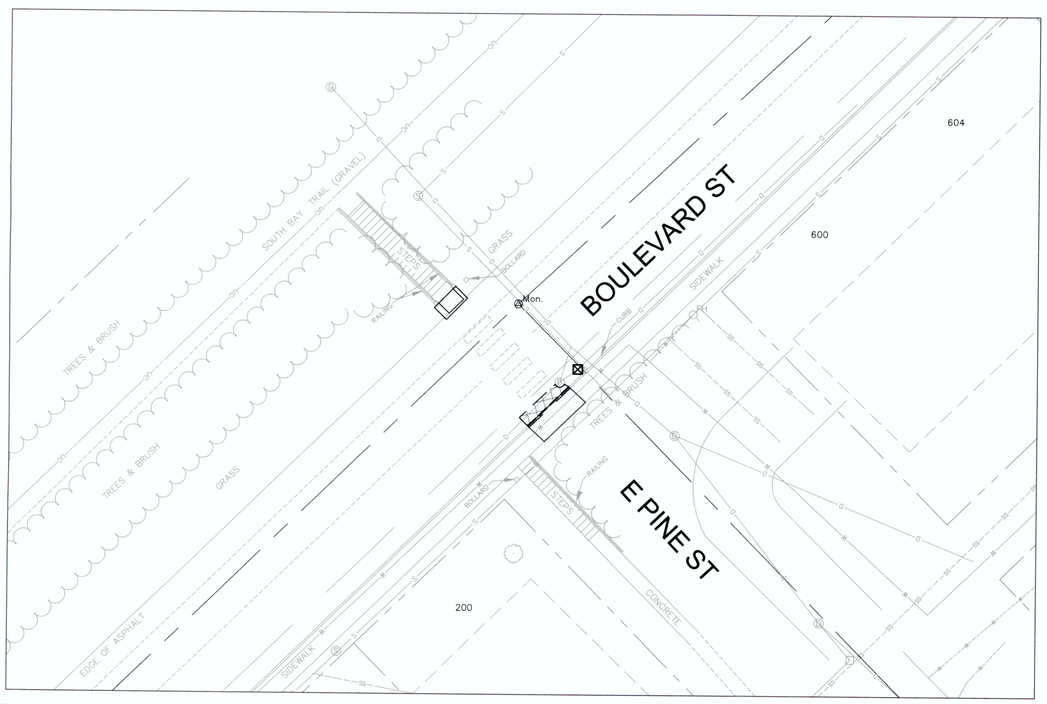
DEMOLITION LEGEND

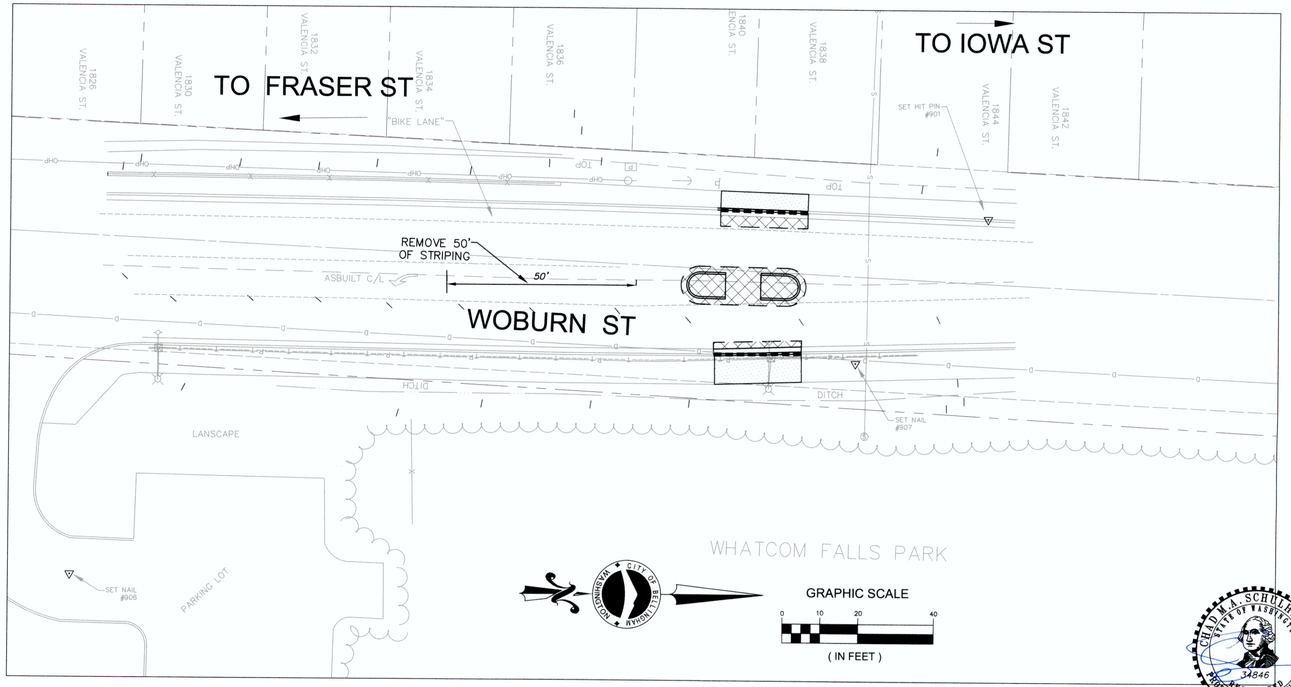
- SAWCUT LINE
- REMOVE CURB AND GUTTER
- ASPHALT REMOVAL
- CONCRETE REMOVAL
- CLEARING AND GRUBBING

EROSION CONTROL LEGEND

- ⊠ CATCH BASIN INSERT



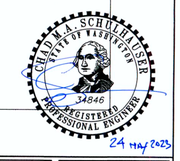




GRAPHIC SCALE

0 10 20 40

(IN FEET)



Date	No	Revision	By
	4		
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PROJECT ENGINEER JJB
DESIGNED/DRAWN ELH
INSPECTOR ?

DIRECTOR OF PUBLIC WORKS E.C.J.
CITY ENGINEER C.A.M.S.
OPERATIONS ENGINEER M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 20'
Vert. 1"= NA

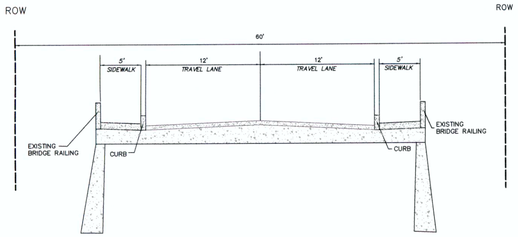
DATUM
NAD 83/98
NAVD 88

Job. No. ES-0563
Date 02/2023
Field Bk. FB

WESTSIDE NON MOTORIZED IMPROVEMENTS
DEMO & TESC INTERSECTIONS 9, 10, & 13

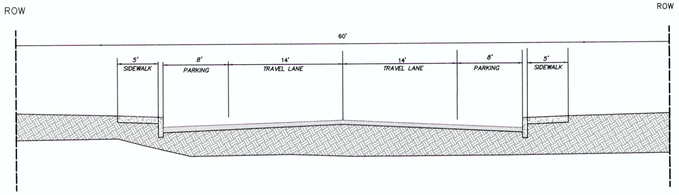
SHEET 25 OF 45

CONTACT PERSON: JESSICA BENNETT, P.E. , PROJECT ENGINEER AT 778-7900



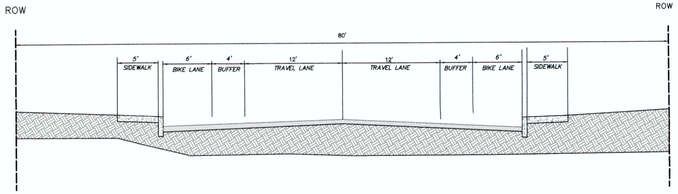
EXISTING ELDRIDGE AVENUE STA:4+00 to 7+75

NTS



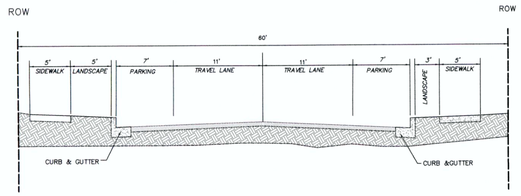
EXISTING- CORNWALL AVENUE STA: 100+50 to 117+50

NTS



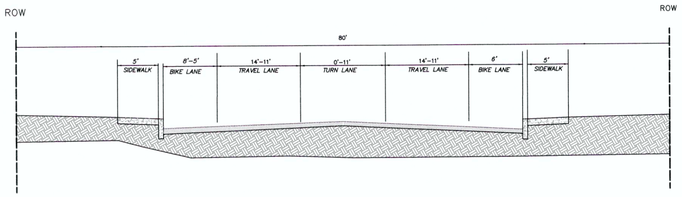
PROPOSED CORNWALL AVENUE STA: 100+50 to 117+50

NTS



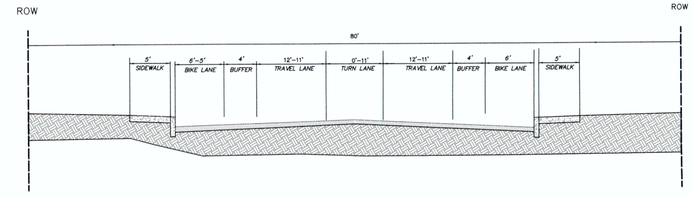
EXISTING ELDRIDGE AVENUE STA: 8+00 to 49+25

NTS



EXISTING CORNWALL AVENUE STA: 117+50 to 120+00

NTS

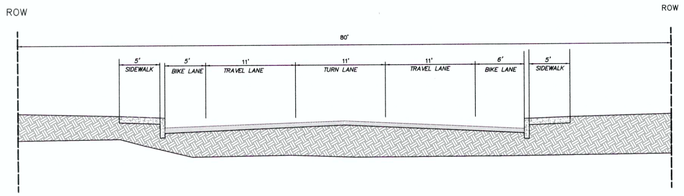


PROPOSED CORNWALL AVENUE STA: 117+50 to 120+00

NTS

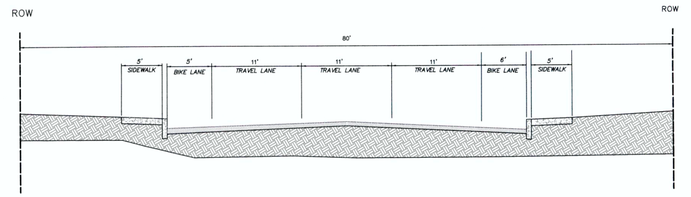
PROPOSED CROSS SECTION ELDRIDGE AVENUE STA: 8+00 to 49+25

NTS



EXISTING CORNWALL AVENUE STA: 120+00

NTS



PROPOSED CORNWALL AVENUE STA:120+00

NTS

	4		
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Date	No	Revision	By

PROJECT ENGINEER JJB
DESIGNED/DRAWN ELH
INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.
CITY ENGINEER C.M.A.S.
OPERATIONS ENGINEER M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 20'
Vert. 1"= NA

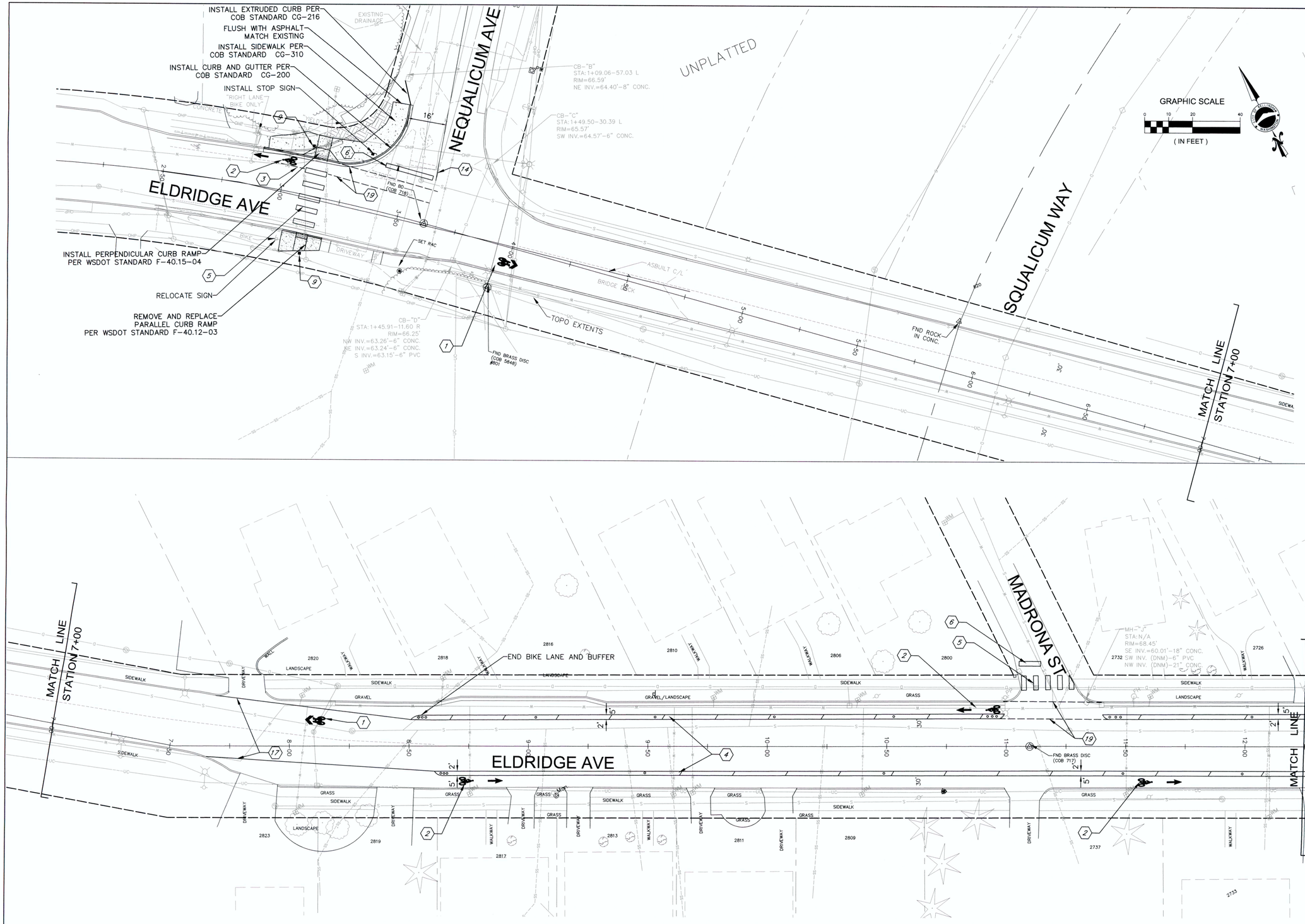
DATUM
NAD 83/98
NAVD 88

Job. No. ES-0563
Date 02/2023
Field Bk. FB

WEST SIDE NON-MOTORIZED IMPROVEMENTS
TYPICAL SECTIONS EXISTING AND PROPOSED

SHEET 26 OF 45

CONTACT PERSON: JESSICA BENNETT , P.E. , PROJECT ENGINEER AT 778-7923



CONSTRUCTION NOTES:

1. INSTALL PLASTIC SHARED LANE SYMBOL AS DIRECTED BY THE ENGINEER
2. INSTALL DESIGNATED BIKE LANE AND ARROW SYMBOLS PER CITY STANDARD PLAN TC-315
3. BIKE LANE STRIPING PER CITY STANDARD TC-315
4. INSTALL BIKE LANE BUFFER WITH HATCHING AND DELINEATORS. SEE DETAIL SHEET 39
5. INSTALL WHITE PREFORMED PLASTIC CROSSWALK LINES PER COB STANDARD TC-310 (SIZE PER PLAN)
6. 24" WHITE PLASTIC STOP LINE (BAR) PER CITY STANDARD PLAN TC-310.
7. BUFFER TRANSITION PER DETAIL SHEET 39
8. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH S1-1 SIGNS.
9. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-2 SIGNS.
10. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-15 SIGNS.
11. INSTALL R1-6a SIGN DOUBLE SIDED WITH POST.
12. INSTALL PUSHBUTTON POST, AND R10-25 SIGN FOR BICYCLES.
13. INSTALL SHORT FLEXIBLE YELLOW DELINEATOR
14. INSTALL DOUBLE YELLOW CENTER STRIPE PER COB STANDARD TC-305
15. INSTALL DETECTABLE WARNING SURFACE PER WSDOT STANDARD F-45.10-03
16. NOT USED THIS SHEET
17. INSTALL 6" PLASTIC LANE LINE.
18. NOT USED THIS SHEET
19. DOTTED EXTENSION LINE PER WSDOT STANDARD M-20.10

CHARLES A. SCHULHAUSER STATE OF WASHINGTON 34846 REGISTERED PROFESSIONAL ENGINEER
24 MAY 2023

	4		
	3		
	2		
	1		
Date	No	Revision	By

PROJECT ENGINEER JJB
DESIGNED/DRAWN ELH
INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.
CITY ENGINEER C.M.A.S.
OPERATIONS ENGINEER M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 20'
Vert. 1"= NA

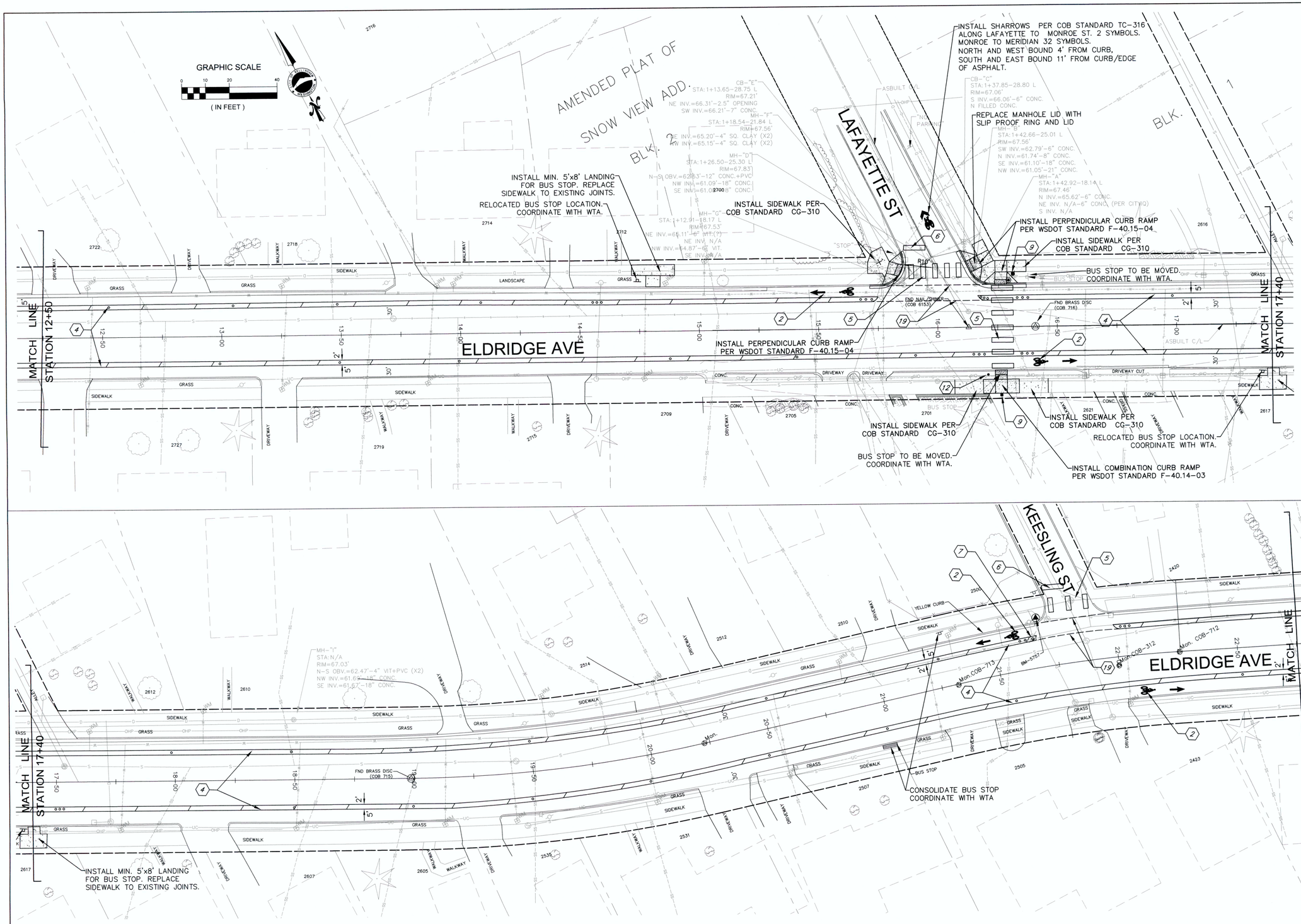
DATUM
NAD 83/98
NAVD 88

Job. No. ES-0563
Date 02/2023
Field Bk. FB 1068-2

WEST SIDE NON-MOTORIZED IMPROVEMENTS
ELDRIDGE AVE. STA: 2+50 to 12+25

SHEET 27 OF 45

CONTACT PERSON: JESSICA BENNETT, P.E. , PROJECT ENGINEER AT 778-7923



CONSTRUCTION NOTES:

1. INSTALL PLASTIC SHARED LANE SYMBOL AS DIRECTED BY THE ENGINEER
2. INSTALL DESIGNATED BIKE LANE AND ARROW SYMBOLS PER CITY STANDARD PLAN TC-315
3. BIKE LANE STRIPING PER CITY STANDARD TC-315
4. INSTALL BIKE LANE BUFFER WITH HATCHING AND DELINEATORS. SEE DETAIL SHEET 39
5. INSTALL WHITE PREFORMED PLASTIC CROSSWALK LINES PER COB STANDARD TC-310 (SIZE PER PLAN)
6. 24" WHITE PLASTIC STOP LINE (BAR) PER CITY STANDARD PLAN TC-310.
7. BUFFER TRANSITION PER DETAIL SHEET 39
8. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH S1-1 SIGNS.
9. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-2 SIGNS.
10. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-15 SIGNS.
11. INSTALL R1-6a SIGN DOUBLE SIDED WITH POST.
12. INSTALL PUSHBUTTON POST, AND R10-25 SIGN FOR BICYCLES.
13. INSTALL SHORT FLEXIBLE YELLOW DELINEATOR
14. INSTALL DOUBLE YELLOW CENTER STRIPE PER COB STANDARD TC-305
15. INSTALL DETECTABLE WARNING SURFACE PER WSDOT STANDARD F-45.10-03
16. NOT USED THIS SHEET
17. INSTALL 6" PLASTIC LANE LINE.
18. NOT USED THIS SHEET
19. DOTTED EXTENSION LINE PER WSDOT STANDARD M-20.10

CHRISTOPHER A. SCHULTHEIS, STATE OF WASHINGTON, 24846, REGISTERED PROFESSIONAL ENGINEER
24 May 2023

Date	No	Revision	By
	4		
	3		
	2		
	1		

PROJECT ENGINEER JJB
DESIGNED/DRAWN ELH
INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.
CITY ENGINEER C.M.A.S.
OPERATIONS ENGINEER M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 20'
Vert. 1"= NA

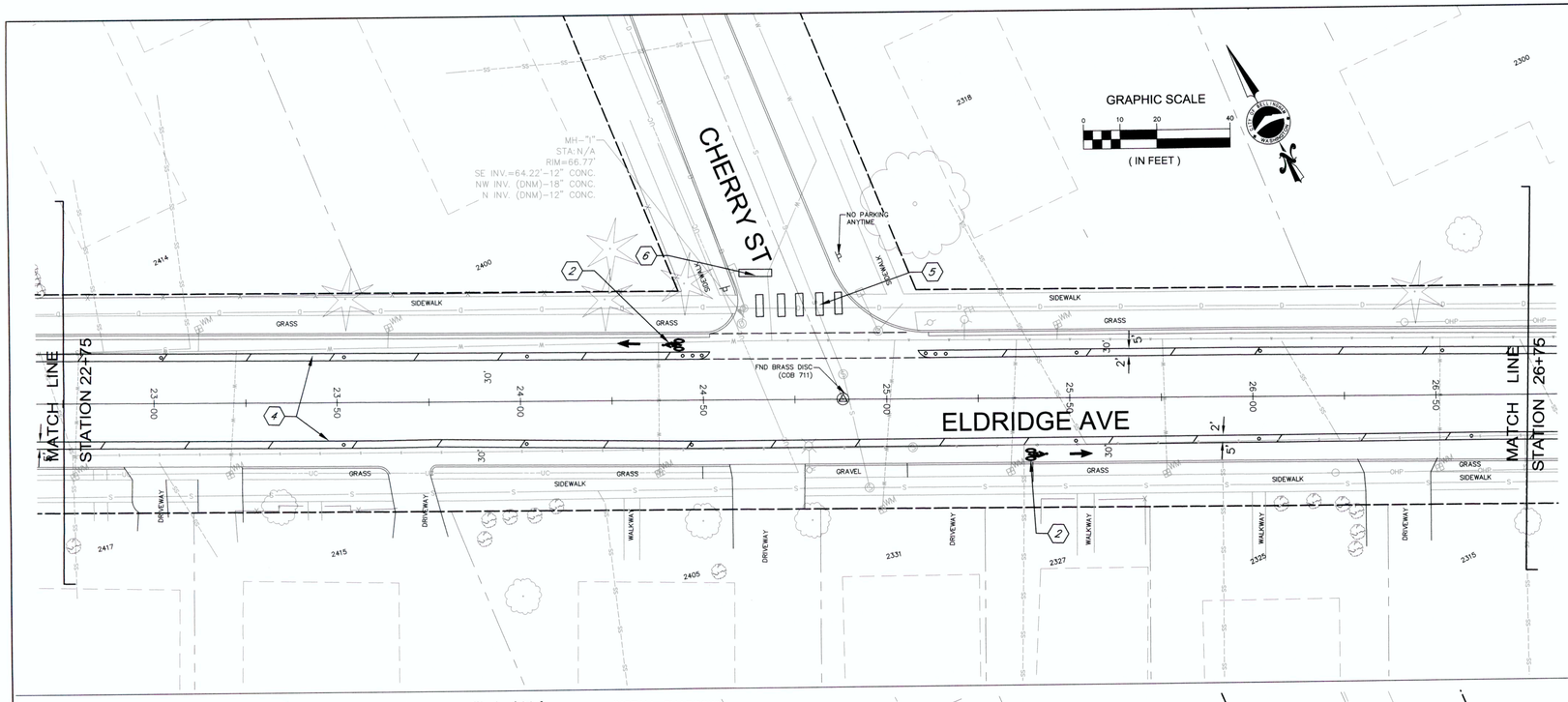
DATUM
NAD 83/98
NAVD 88

Job. No. ES-0563
Date 02/2023
Field Bk. FB 1068-2

WEST SIDE NON-MOTORIZED IMPROVEMENTS
ELDRIDGE AVE. STA: 12+25 to 22+75

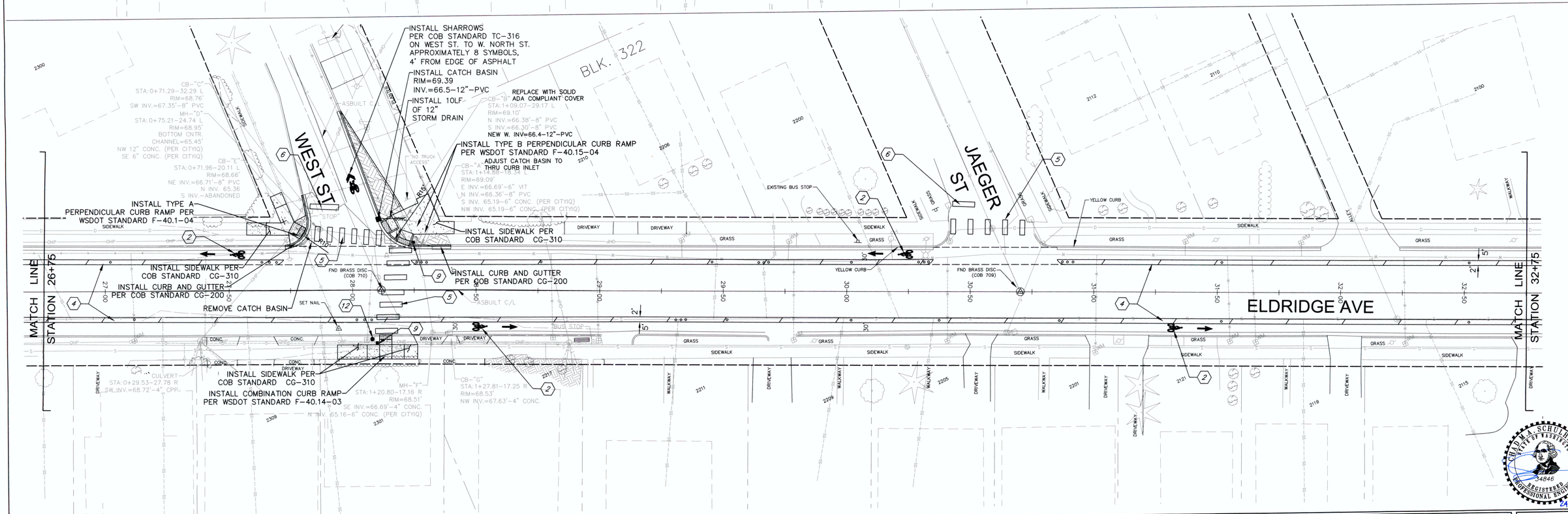
SHEET 28 OF 45

CONTACT PERSON: JESSICA BENNETT, P.E. , PROJECT ENGINEER AT 778-7923



CONSTRUCTION NOTES:

1. INSTALL PLASTIC SHARED LANE SYMB(AS DIRECTED BY THE ENGINEER
2. INSTALL DESIGNATED BIKE LANE AND ARROW SYMBOLS PER CITY STANDARD PLAN TC-315
3. BIKE LANE STRIPING PER CITY STANDARD TC-315
4. INSTALL BIKE LANE BUFFER WITH HATCHING AND DELINEATORS. SEE DETAIL SHEET 39
5. INSTALL WHITE PREFORMED PLASTIC CROSSWALK LINES PER COB STANDARD TC-310 (SIZE PER PLAN)
6. 24" WHITE PLASTIC STOP LINE (BAR) PER CITY STANDARD PLAN TC-310.
7. BUFFER TRANSITION PER DETAIL SHEET 39
8. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH S1-1 SIGNS.
9. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-2 SIGNS.
10. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-15 SIGNS.
11. INSTALL R1-6a SIGN DOUBLE SIDED WITH POST.
12. INSTALL PUSHBUTTON POST, AND R10-25 SIGN FOR BICYCLES.
13. INSTALL SHORT FLEXIBLE YELLOW DELINEATOR
14. INSTALL DOUBLE YELLOW CENTER STRIPE PER COB STANDARD TC-305
15. INSTALL DETECTABLE WARNING SURFACE PER WSDOT STANDARD F-45.10-03
16. NOT USED THIS SHEET
17. INSTALL 6" PLASTIC LANE LINE.
18. NOT USED THIS SHEET
19. DOTTED EXTENSION LINE PER WSDOT STANDARD M-20.10



Date	No	Revision	By
	4		
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PROJECT ENGINEER JJB
DESIGNED/DRAWN ELH
INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.
CITY ENGINEER C.M.A.S.
OPERATIONS ENGINEER M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 20'
Vert. 1"= NA

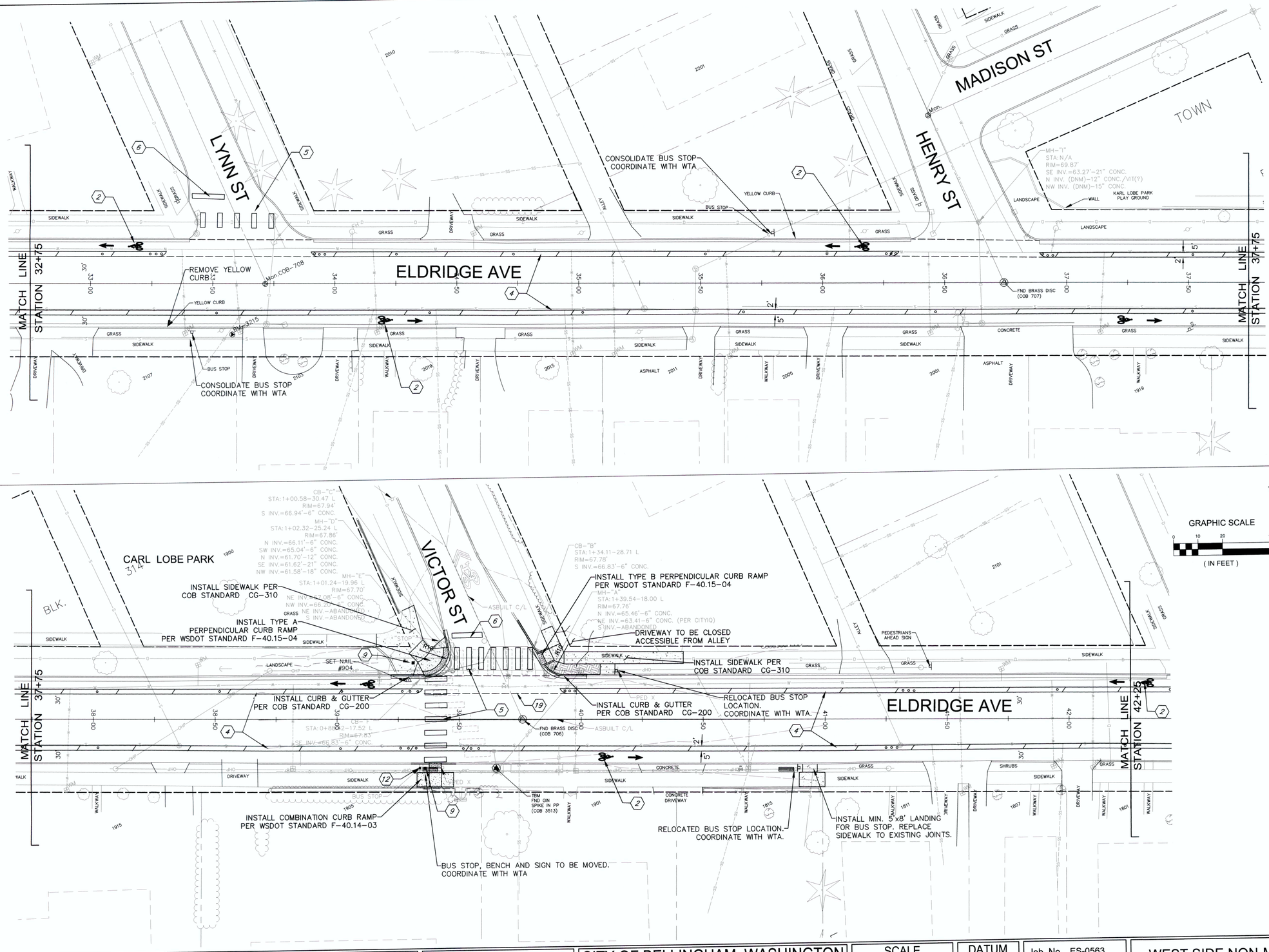
DATUM
NAD 83/98
NAVD 88

Job. No. ES-0563
Date 02/2023
Field Bk. FB 1068-2

WEST SIDE NON-MOTORIZED IMPROVEMENTS
ELDRIDGE AVE. STA: 22+75 to 32+75

SHEET 29 OF 45

CONTACT PERSON: JESSICA BENNETT, P.E. , PROJECT ENGINEER AT 778-7923



CONSTRUCTION NOTES:

1. INSTALL PLASTIC SHARED LANE SYMBOL AS DIRECTED BY THE ENGINEER
2. INSTALL DESIGNATED BIKE LANE AND ARROW SYMBOLS PER CITY STANDARD PLAN TC-315
3. BIKE LANE STRIPING PER CITY STANDARD TC-315
4. INSTALL BIKE LANE BUFFER WITH HATCHING AND DELINEATORS. SEE DETAIL SHEET 39
5. INSTALL WHITE PREFORMED PLASTIC CROSSWALK LINES PER COB STANDARD TC-310 (SIZE PER PLAN)
6. 24" WHITE PLASTIC STOP LINE (BAR) PER CITY STANDARD PLAN TC-310.
7. BUFFER TRANSITION PER DETAIL SHEET 39
8. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH S1-1 SIGNS.
9. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-2 SIGNS.
10. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-15 SIGNS.
11. INSTALL R1-6a SIGN DOUBLE SIDED WITH POST.
12. INSTALL PUSHBUTTON POST, AND R10-25 SIGN FOR BICYCLES.
13. INSTALL SHORT FLEXIBLE YELLOW DELINEATOR
14. INSTALL DOUBLE YELLOW CENTER STRIPI PER COB STANDARD TC-305
15. INSTALL DETECTABLE WARNING SURFACE PER WSDOT STANDARD F-45.10-03
16. NOT USED THIS SHEET
17. INSTALL 6" PLASTIC LANE LINE.
18. NOT USED THIS SHEET
19. DOTTED EXTENSION LINE PER WSDOT STANDARD M-20.10

CHAD A. SCHLAUSER — STATE OF WASHINGTON — 34846 — REGISTERED PROFESSIONAL ENGINEER
24 may 2023

No	Date	Revision	By
4			
3			
2			
1			

PROJECT ENGINEER JJB
DESIGNED/DRAWN ELH
INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.
CITY ENGINEER C.M.A.S.
OPERATIONS ENGINEER M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 20'
Vert. 1"= NA

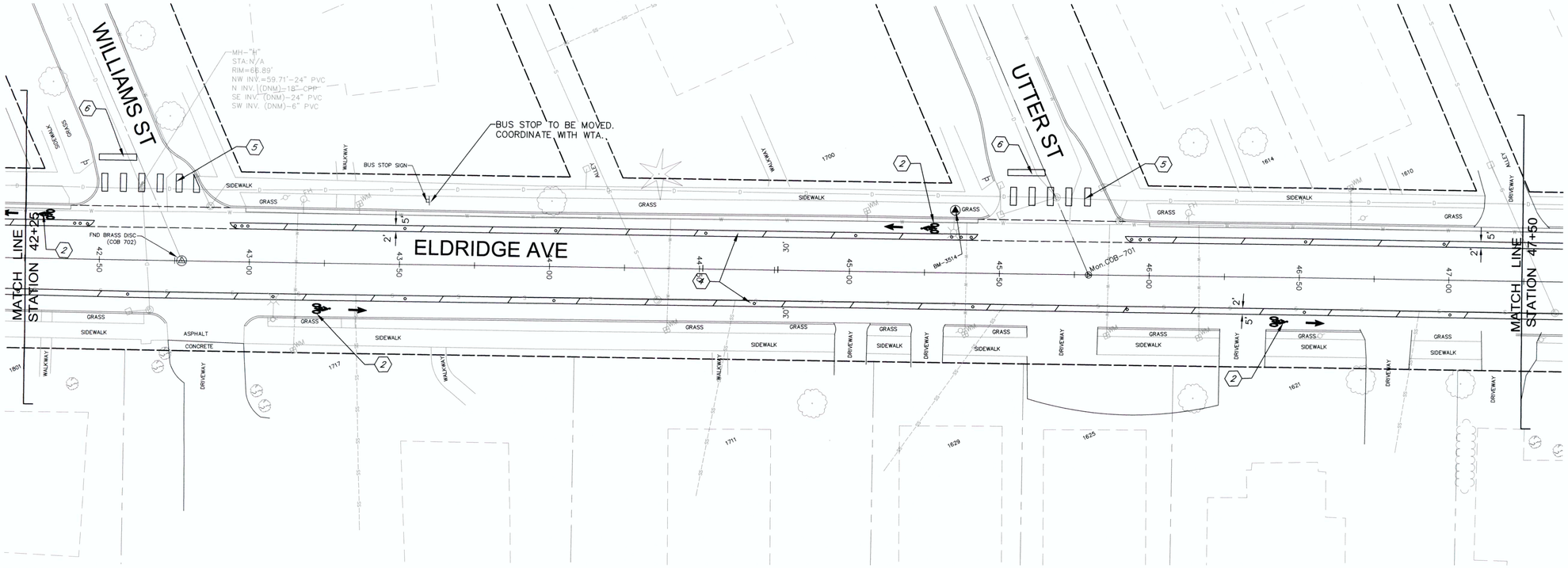
DATUM
NAD 83/98
NAVD 88

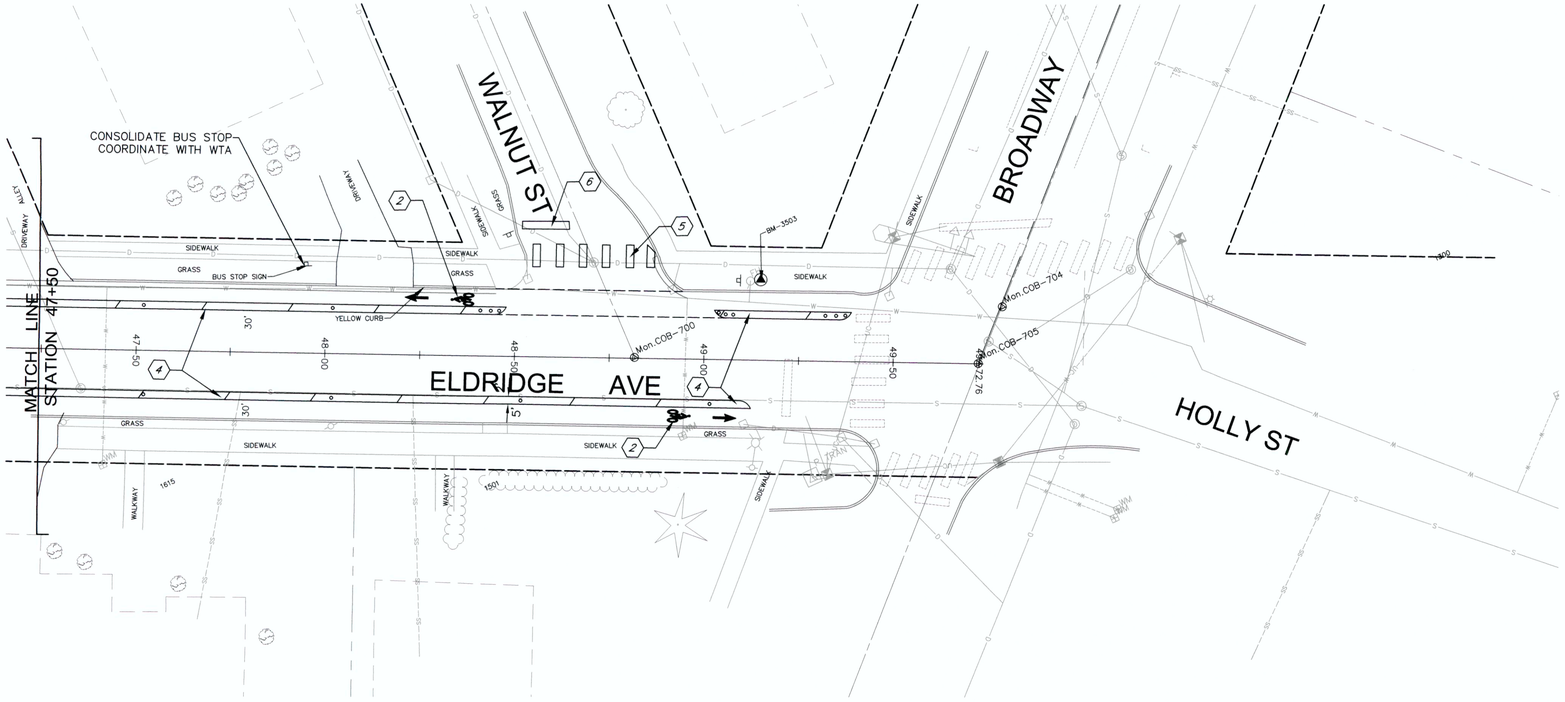
Job. No. ES-0563
Date 02/2023
Field Bk. FB 1068-2

WEST SIDE NON-MOTORIZED IMPROVEMENTS
ELDRIDGE AVE. STA: 32+75 to 42+25

SHEET 30 OF 45

CONTACT PERSON: JESSICA BENNETT, P.E. , PROJECT ENGINEER AT 778-7923





CONSTRUCTION NOTES:

1. INSTALL PLASTIC SHARED LANE SYMBOL AS DIRECTED BY THE ENGINEER
2. INSTALL DESIGNATED BIKE LANE AND ARROW SYMBOLS PER CITY STANDARD PLAN TC-315
3. BIKE LANE STRIPING PER CITY STANDARD TC-315
4. INSTALL BIKE LANE BUFFER WITH HATCHING AND DELINEATORS. SEE DETAIL SHEET 39
5. INSTALL WHITE PREFORMED PLASTIC CROSSWALK LINES PER COB STANDARD TC-310 (SIZE PER PLAN)
6. 24" WHITE PLASTIC STOP LINE (BAR) PER CITY STANDARD PLAN TC-310.
7. BUFFER TRANSITION PER DETAIL SHEET 39
8. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH S1-1 SIGNS.
9. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-2 SIGNS.
10. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-15 SIGNS.
11. INSTALL R1-6a SIGN DOUBLE SIDED WITH POST.
12. INSTALL PUSHBUTTON POST, AND R10-25 SIGN FOR BICYCLES.
13. INSTALL SHORT FLEXIBLE YELLOW DELINEATOR
14. INSTALL DOUBLE YELLOW CENTER STRIPE PER COB STANDARD TC-305
15. INSTALL DETECTABLE WARNING SURFACE PER WSDOT STANDARD F-45.10-03
16. NOT USED THIS SHEET
17. INSTALL 6" PLASTIC LANE LINE.
18. NOT USED THIS SHEET
19. DOTTED EXTENSION LINE PER WSDOT STANDARD M-20.10

EDWARD A. SCHLEIMER — STATE OF WASHINGTON — 34846 — REGISTERED PROFESSIONAL ENGINEER
24 May 2023

No	Date	Revision	By
4			
3			
2			
1			

PROJECT ENGINEER JJB
DESIGNED/DRAWN ELH
INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.
CITY ENGINEER C.M.A.S.
OPERATIONS ENGINEER M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 20'
Vert. 1"= NA

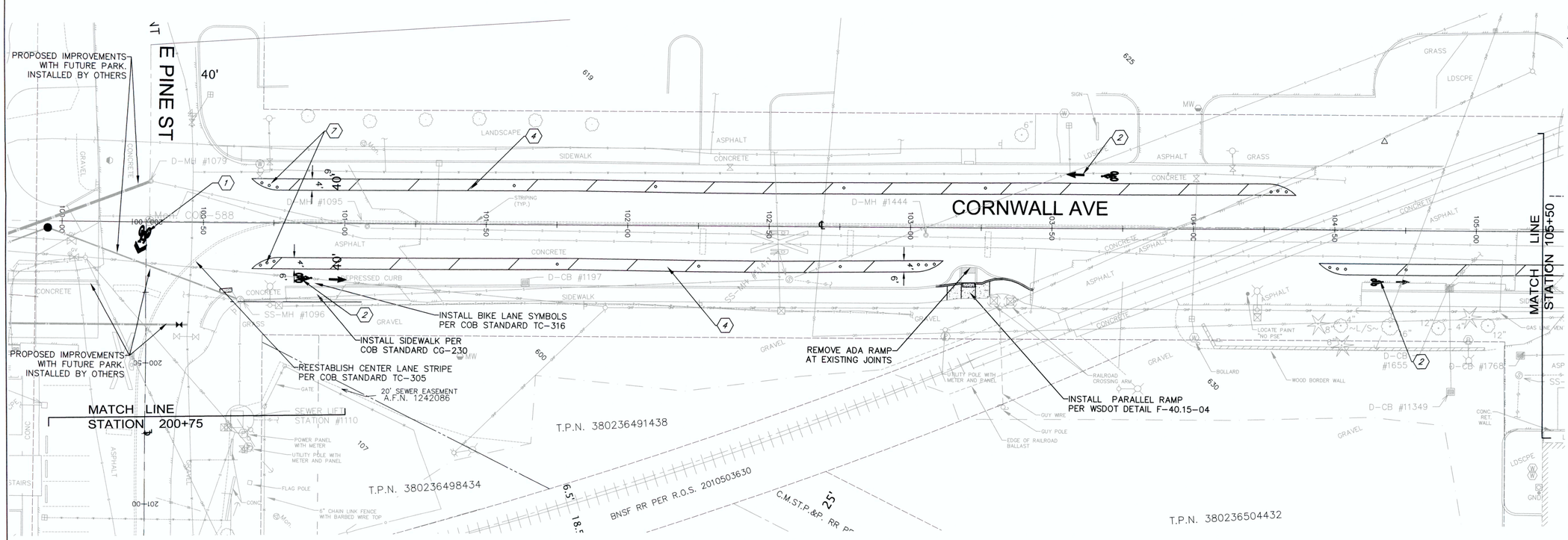
DATUM
NAD 83/98
NAVD 88

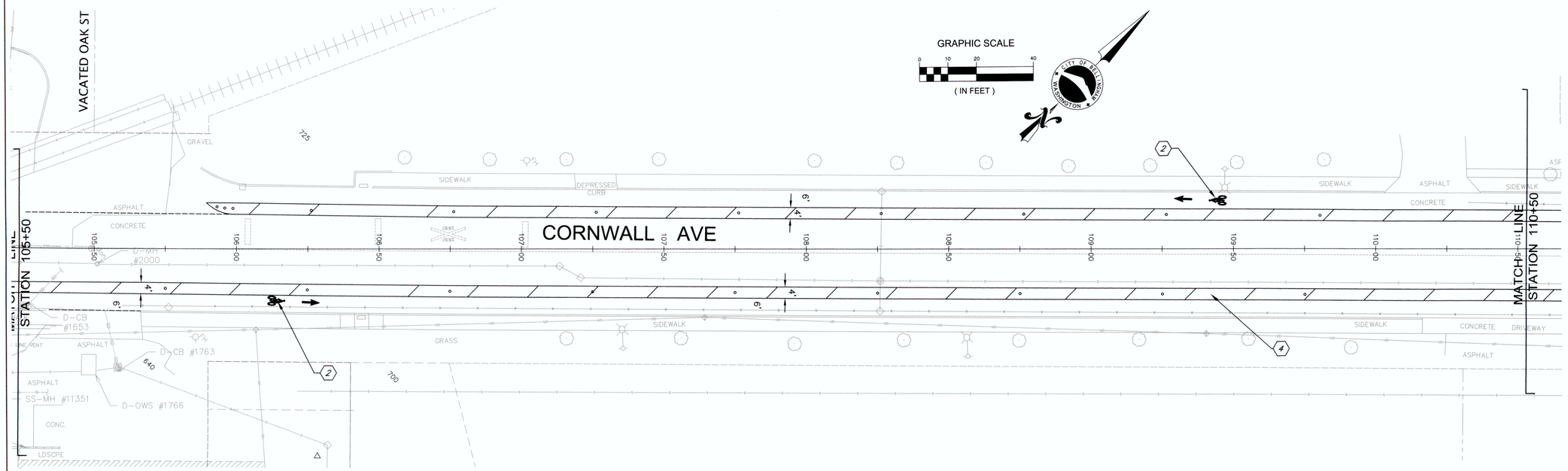
Job. No. ES-0563
Date 02/2023
Field Bk. FB 1068-2

WEST SIDE NON-MOTORIZED IMPROVEMENTS
ELDRIDGE AVE. STA: 42+25 to 50+00

SHEET 31 OF 45

CONTACT PERSON: JESSICA BENNETT, P.E , PROJECT ENGINEER AT 778-7923





GRAPHIC SCALE
0 10 20 40
(IN FEET)

CONSTRUCTION NOTES:

1. INSTALL PLASTIC SHARED LANE SYMBOL AS DIRECTED BY THE ENGINEER
2. INSTALL DESIGNATED BIKE LANE AND ARROW SYMBOLS PER CITY STANDARD PLAN TC-315
3. BIKE LANE STRIPING PER CITY STANDARD TC-315
4. INSTALL BIKE LANE BUFFER WITH HATCHING AND DELINEATORS. SEE DETAIL SHEET 39
5. INSTALL 2'X9' WHITE PLASTIC CROSS-WALK LINES PER WSDOT STANDARD PLAN M-15.10
6. 24" WHITE PLASTIC STOP LINE (BAR) PER CITY STANDARD PLAN TC-310.
7. BUFFER TRANSITION PER DETAIL SHEET 39
8. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH S1-1 SIGNS.
9. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-2 SIGNS.
10. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-15 SIGNS.
11. INSTALL R1-6a SIGN DOUBLE SIDED WITH POST.
12. INSTALL PUSHBUTTON POST, AND R10-25 SIGN FOR BICYCLES.
13. INSTALL SHORT FLEXIBLE YELLOW DELINEATOR
14. INSTALL DOUBLE YELLOW CENTER STRIPE PER COB STANDARD TC-305
15. INSTALL DETECTABLE WARNING SURFACE PER WSDOT STANDARD F-45.10-03
16. NOT USED THIS SHEET
17. INSTALL 6" PLASTIC LANE LINE.
18. NOT USED THIS SHEET
19. DOTTED EXTENSION LINE PER WSDOT STANDARD M-20.10

CHAD M. SCHILLHAMMER — STATE OF WASHINGTON — 34846 — REGISTERED PROFESSIONAL ENGINEER
24 MAY 2023

Date	No	Revision	By
	4		
	3		
	2		
	1		

PROJECT ENGINEER JJB
DESIGNED/DRAWN ELH
INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.
CITY ENGINEER C.A.M.S.
OPERATIONS ENGINEER M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 20'
Vert. 1"= NA

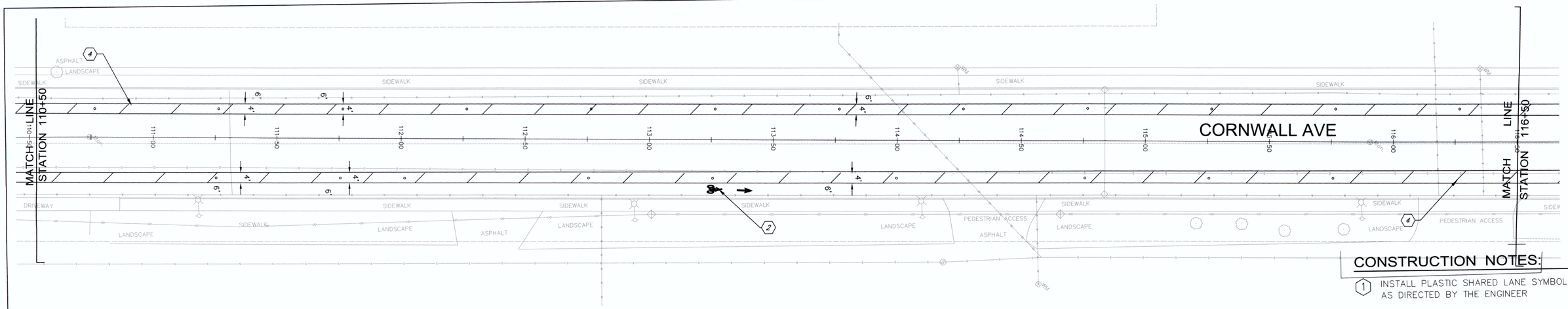
DATUM
NAD 83/98
NAVD 88

Job. No. ES-0563
Date 02/2023
Field Bk. FB 1068-2

WEST SIDE NON-MOTORIZED IMPROVEMENTS
CORNWALL AVE. STA: 100+00 to 110+50

SHEET 32 OF 45

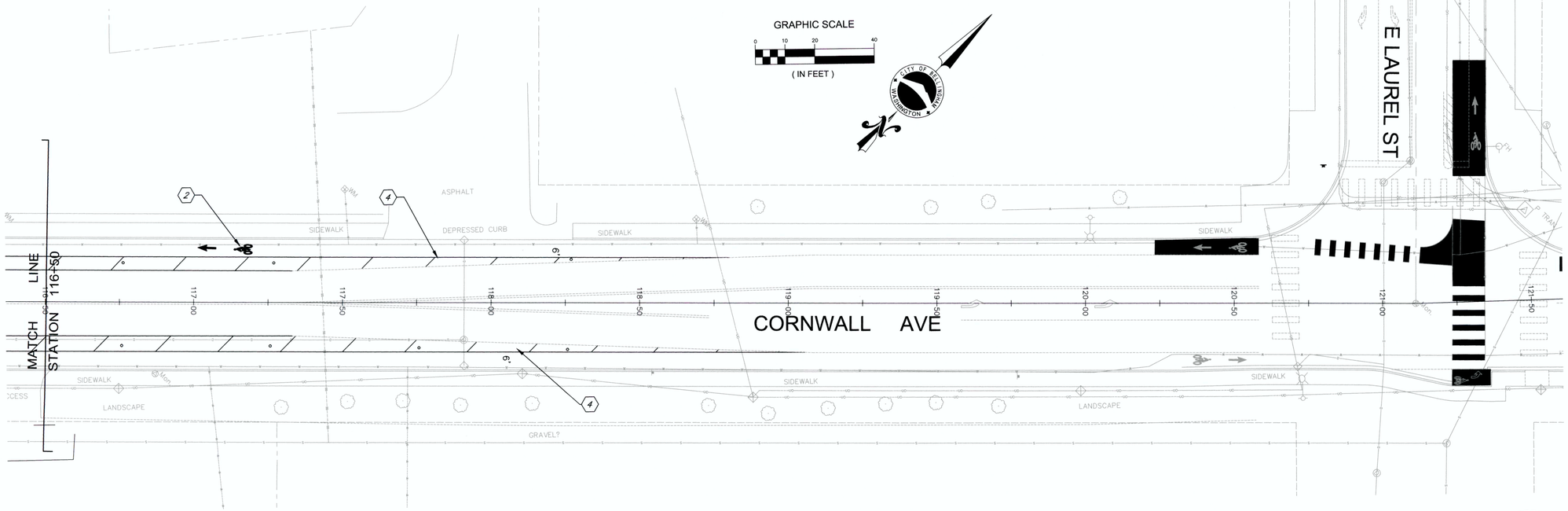
CONTACT PERSON: JESSICA BENNETT, P.E. , PROJECT ENGINEER AT 778-7923



GRAPHIC SCALE

0 10 20 40

(IN FEET)



CONSTRUCTION NOTES:

1. INSTALL PLASTIC SHARED LANE SYMBOL AS DIRECTED BY THE ENGINEER
2. INSTALL DESIGNATED BIKE LANE AND ARROW SYMBOLS PER CITY STANDARD PLAN TC-315
3. BIKE LANE STRIPING PER CITY STANDARD TC-315
4. INSTALL BIKE LANE BUFFER WITH HATCHING AND DELINEATORS. SEE DETAIL SHEET 39
5. INSTALL 2'X9' WHITE PLASTIC CROSS-WALK LINES PER WSDOT STANDARD PLAN M-15.10
6. 24" WHITE PLASTIC STOP LINE (BAR) PER CITY STANDARD PLAN TC-310.
7. BUFFER TRANSITION PER DETAIL SHEET 39
8. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH S1-1 SIGNS.
9. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-2 SIGNS.
10. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-15 SIGNS.
11. INSTALL R1-6a SIGN DOUBLE SIDED WITH POST.
12. INSTALL PUSHBUTTON POST, AND R10-25 SIGN FOR BICYCLES.
13. INSTALL SHORT FLEXIBLE YELLOW DELINEATOR
14. INSTALL DOUBLE YELLOW CENTER STRIPE PER COB STANDARD TC-305
15. INSTALL DETECTABLE WARNING SURFACE PER WSDOT STANDARD F-45.10-03
16. NOT USED THIS SHEET
17. INSTALL 6" PLASTIC LANE LINE.
18. NOT USED THIS SHEET
19. DOTTED EXTENSION LINE PER WSDOT STANDARD M-20.10

CHRISTINA M. SCHUMACHER — STATE OF WASHINGTON — 34546 — REGISTERED PROFESSIONAL ENGINEER

29 May 2023

Date	No	Revision	By
	4		
	3		
	2		
	1		

PROJECT ENGINEER JJB
DESIGNED/DRAWN ELH
INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.
CITY ENGINEER C.A.M.S.
OPERATIONS ENGINEER M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 20'
Vert. 1"= NA

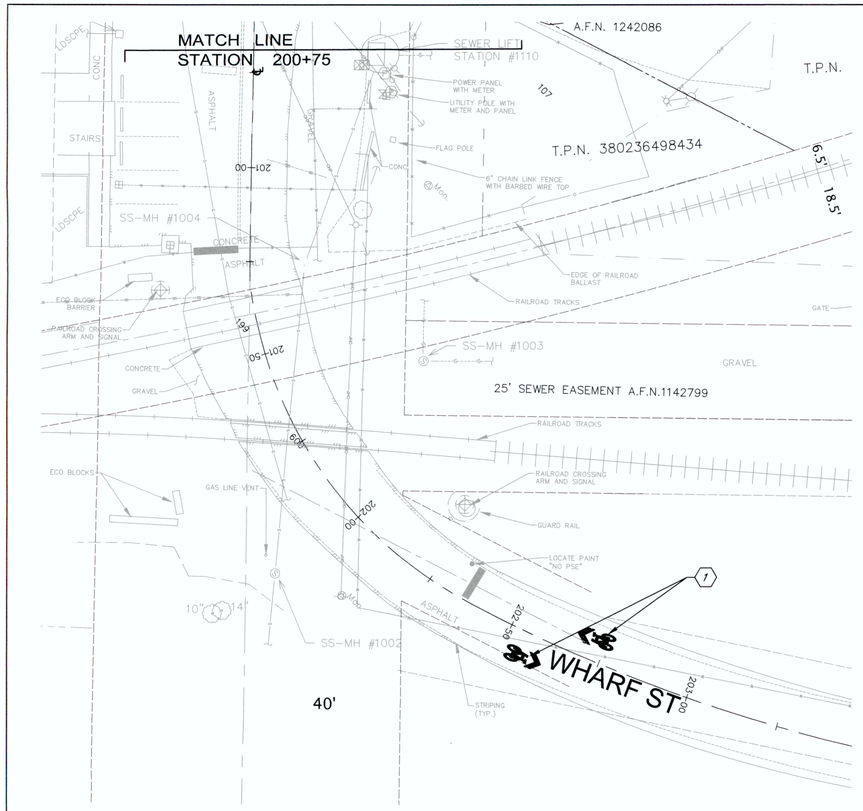
DATUM
NAD 83/98
NAVD 88

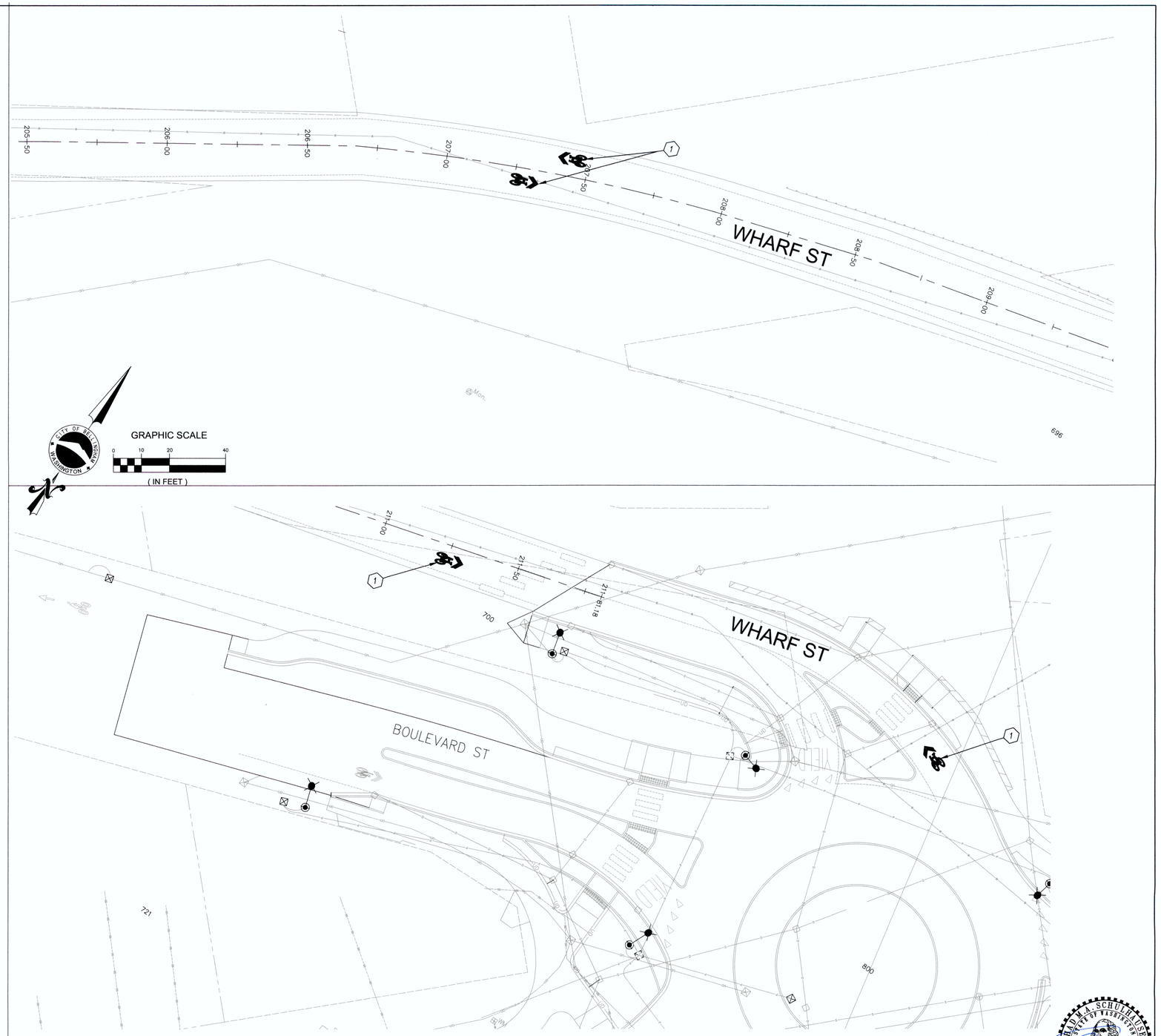
Job. No. ES-0563
Date 02/2023
Field Bk. FB 1068-2

WEST SIDE NON-MOTORIZED IMPROVEMENTS
CORNWALL AVE. STA: 110+50 to 121+50

SHEET 33 OF 45

CONTACT PERSON: JESSICA BENNETT, P.E. , PROJECT ENGINEER AT 778-7923





CONSTRUCTION NOTES:

1. INSTALL PLASTIC SHARED LANE SYMBOL AS DIRECTED BY THE ENGINEER
2. INSTALL DESIGNATED BIKE LANE AND ARROW SYMBOLS PER CITY STANDARD PLAN TC-315
3. BIKE LANE STRIPING PER CITY STANDARD TC-315
4. INSTALL BIKE LANE BUFFER WITH HATCHING AND DELINEATORS. SEE DETAIL SHEET 39
5. INSTALL 2'X9' WHITE PLASTIC CROSS-WALK LINES PER WSDOT STANDARD PLAN M-15.10
6. 24" WHITE PLASTIC STOP LINE (BAR) PER CITY STANDARD PLAN TC-310.
7. BUFFER TRANSITION PER DETAIL SHEET 39
8. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH S1-1 SIGNS.
9. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-2 SIGNS.
10. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-15 SIGNS.
11. INSTALL R1-6a SIGN DOUBLE SIDED WITH POST.
12. INSTALL PUSHBUTTON POST, AND R10-25 SIGN FOR BICYCLES.
13. INSTALL SHORT FLEXIBLE YELLOW DELINEATOR
14. INSTALL DOUBLE YELLOW CENTER STRIPE PER COB STANDARD TC-305
15. INSTALL DETECTABLE WARNING SURFACE PER WSDOT STANDARD F-45.10-03
16. NOT USED THIS SHEET
17. INSTALL 6" PLASTIC LANE LINE.
18. NOT USED THIS SHEET

LINDA M. SCHULTHEIS — STATE OF WASHINGTON — 34846 — REGISTERED PROFESSIONAL ENGINEER — 2/nov/23

No	Revision	By	Date
4			
3			
2			
1			

PROJECT ENGINEER JJB
DESIGNED/DRAWN ELH
INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.
CITY ENGINEER C.A.M.S.
OPERATIONS ENGINEER M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 20'
Vert. 1"= NA

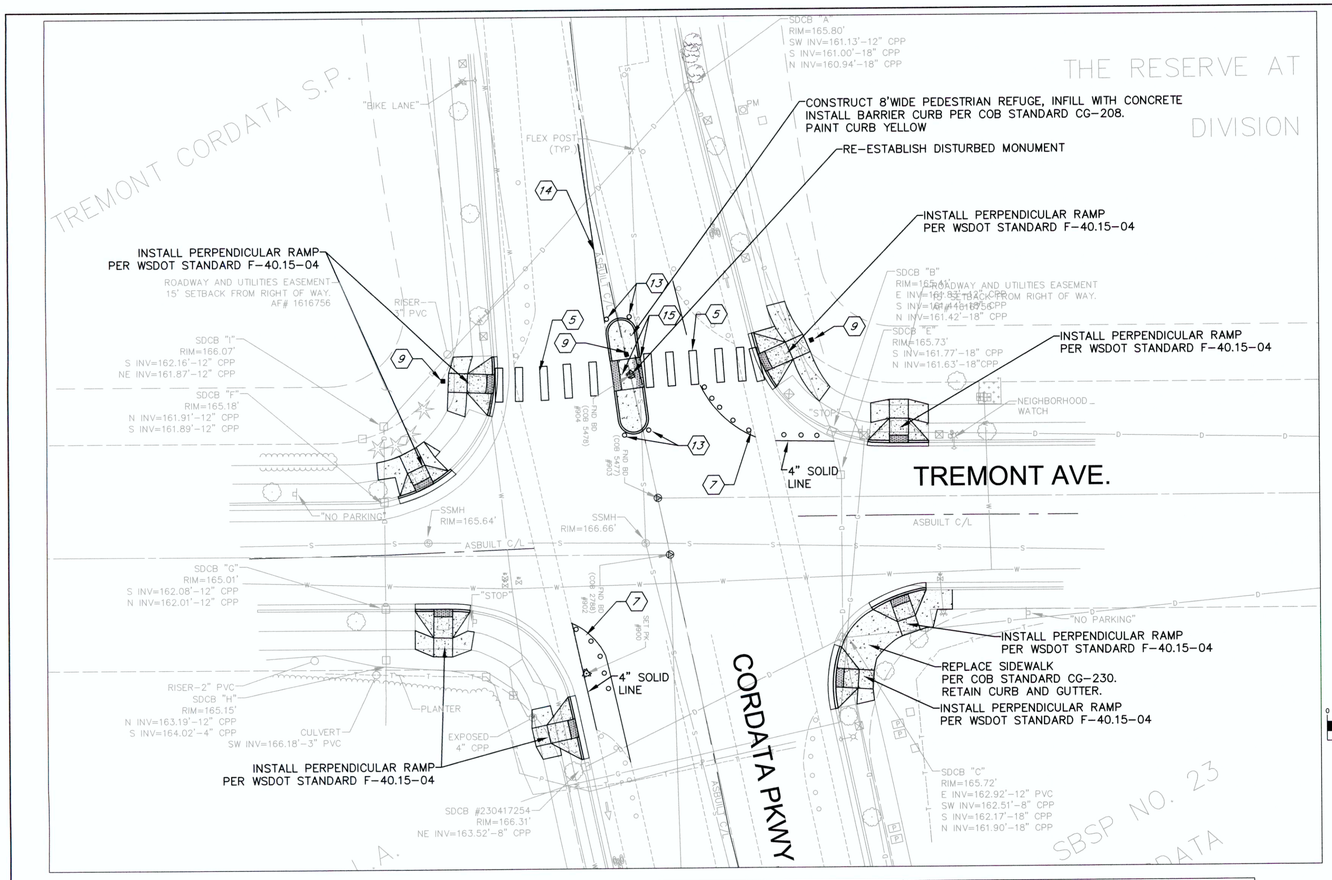
DATUM
NAD 83/98
NAVD 88

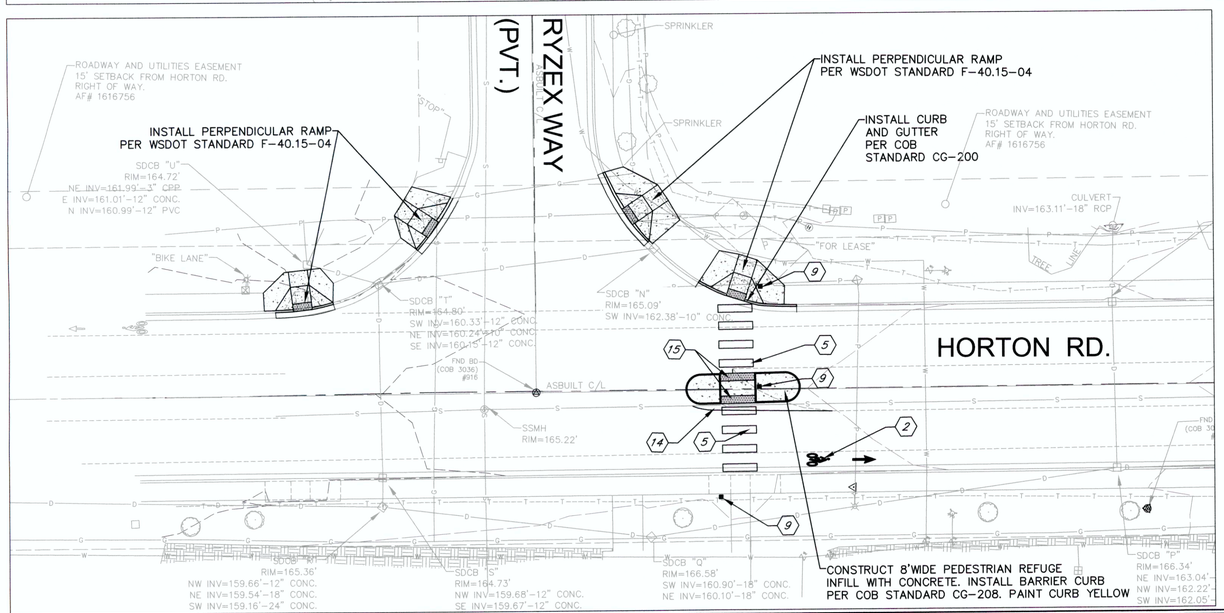
Job. No. ES-0563
Date 02/2023
Field Bk. FB 1068-2

WEST SIDE NON-MOTORIZED IMPROVEMENTS
CHANNELIZATION WHARF ST.

SHEET 34 OF 45

CONTACT PERSON: JESSICA BENNETT, P.E. , PROJECT ENGINEER AT 778-7923





CONSTRUCTION NOTES:

1. INSTALL PLASTIC SHARED LANE SYMBOL AS DIRECTED BY THE ENGINEER
2. INSTALL DESIGNATED BIKE LANE AND ARROW SYMBOLS PER CITY STANDARD PLAN TC-315
3. BIKE LANE STRIPING PER CITY STANDARD TC-315
4. INSTALL BIKE LANE BUFFER WITH HATCHING AND DELINEATORS. SEE DETAIL SHEET 39
5. INSTALL 2'X9' WHITE PLASTIC CROSS-WALK LINES PER WSDOT STANDARD PLAN M-15.10
6. 24" WHITE PLASTIC STOP LINE (BAR) PER CITY STANDARD PLAN TC-310.
7. BUFFER TRANSITION PER DETAIL SHEET 39
8. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH S1-1 SIGNS.
9. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-2 SIGNS.
10. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-15 SIGNS.
11. INSTALL R1-6a SIGN DOUBLE SIDED WITH POST.
12. INSTALL PUSHBUTTON POST, AND R10-25 SIGN FOR BICYCLES.
13. INSTALL SHORT FLEXIBLE YELLOW DELINEATOR
14. INSTALL DOUBLE YELLOW CENTER STRIPE PER COB STANDARD TC-305
15. INSTALL DETECTABLE WARNING SURFACE PER WSDOT STANDARD F-45.10-03
16. NOT USED THIS SHEET
17. INSTALL 6" PLASTIC LANE LINE.
18. NOT USED THIS SHEET
19. DOTTED EXTENSION LINE PER WSDOT STANDARD M-20.10

CHAD M. SCHULHAUSER STATE OF WASHINGTON 34846 REGISTERED PROFESSIONAL ENGINEER
24 MAY 2023

Date	No	Revision	By
	4		
	3		
	2		
	1		

PROJECT ENGINEER JJB
DESIGNED/DRAWN ELH
INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.
CITY ENGINEER C.A.M.S.
OPERATIONS ENGINEER M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 20'
Vert. 1"= NA

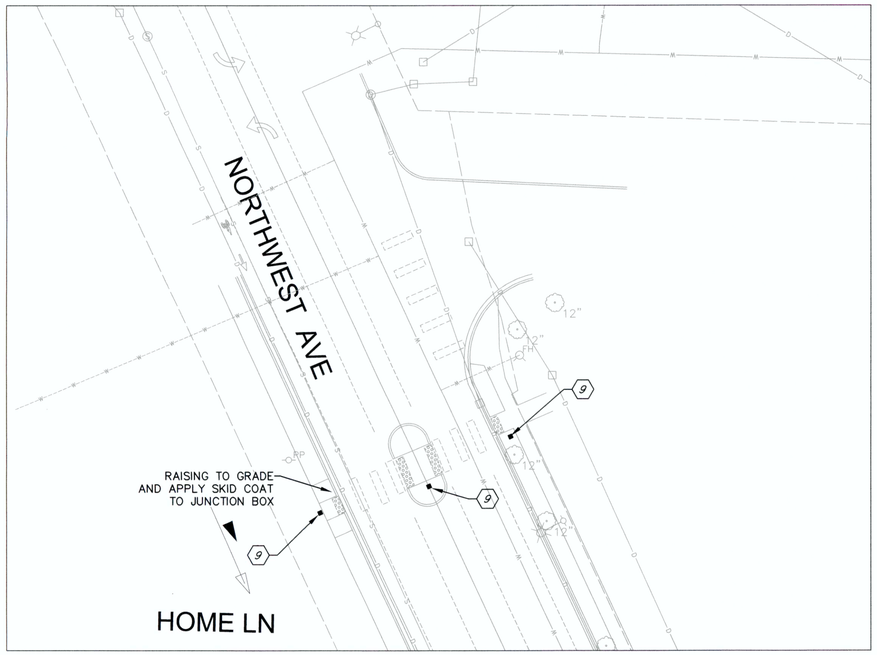
DATUM
NAD 83/98
NAVD 88

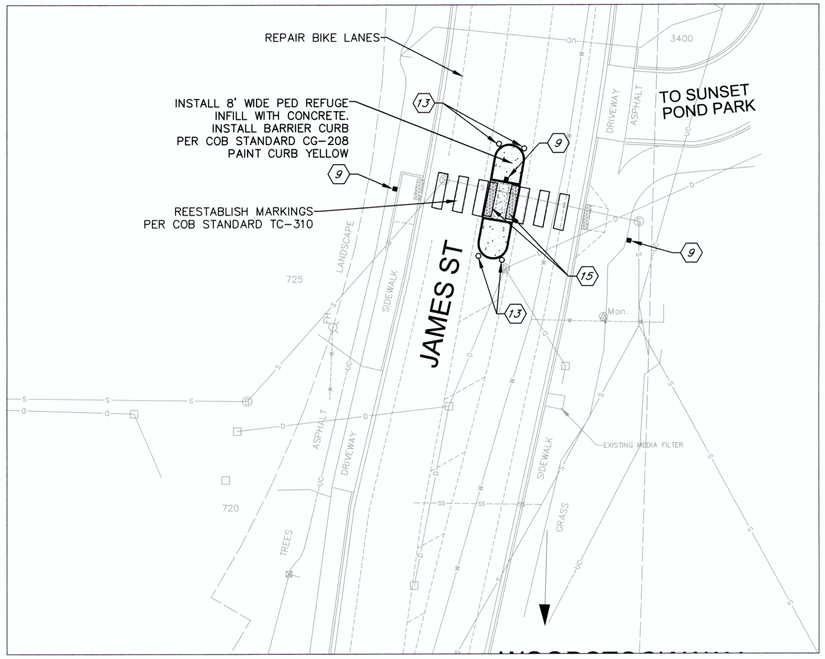
Job. No. ES-0563
Date 02/2023
Field Bk. FB 1068-2

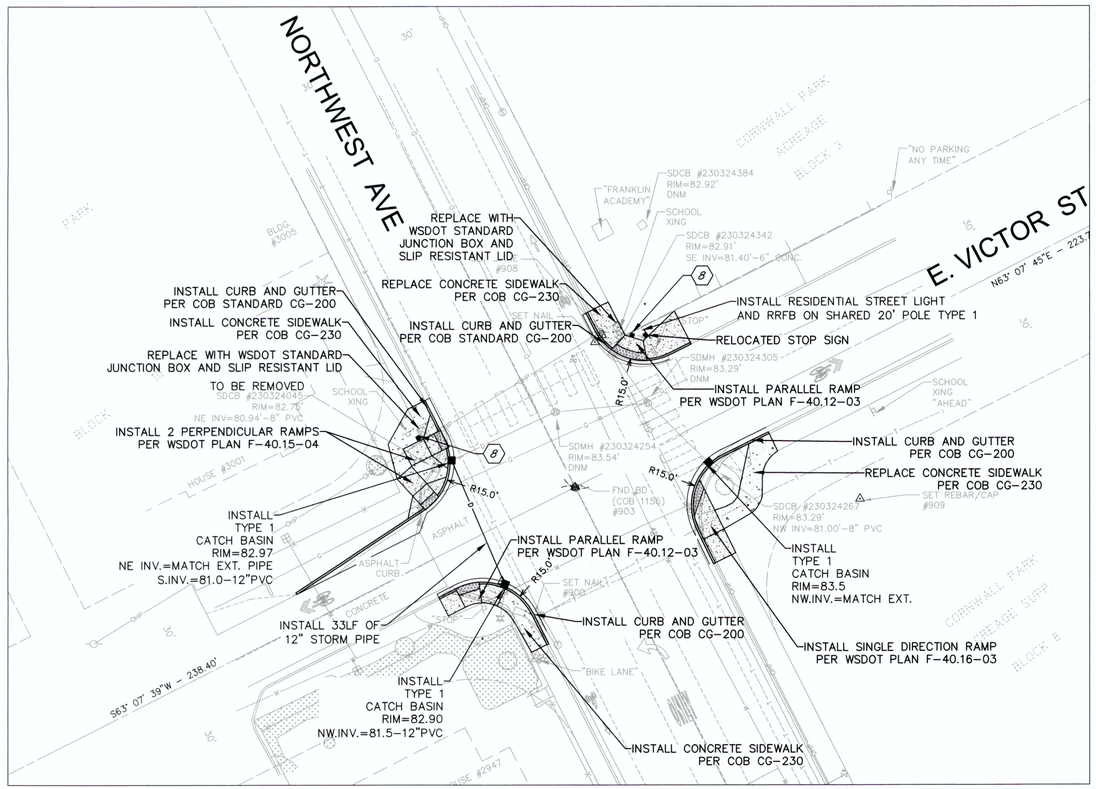
WEST SIDE NON-MOTORIZED IMPROVEMENTS
CHANNELIZATION & RRFB INTERSECTIONS 1, 2, 3

SHEET 35 OF 45

CONTACT PERSON: JESSICA BENNET, P.E. , PROJECT ENGINEER AT 778-7923







GRAPHIC SCALE

0 10 20 40

(IN FEET)

CONSTRUCTION NOTES:

1. INSTALL PLASTIC SHARED LANE SYMBOL AS DIRECTED BY THE ENGINEER
2. INSTALL DESIGNATED BIKE LANE AND ARROW SYMBOLS PER CITY STANDARD PLAN TC-315
3. BIKE LANE STRIPING PER CITY STANDARD TC-315
4. INSTALL BIKE LANE BUFFER WITH HATCHING AND DELINEATORS. SEE DETAIL SHEET 39
5. INSTALL 2'X9' WHITE PLASTIC CROSS-WALK LINES PER WSDOT STANDARD PLAN M-15.10
6. 24" WHITE PLASTIC STOP LINE (BAR) PER CITY STANDARD PLAN TC-310.
7. BUFFER TRANSITION PER DETAIL SHEET 39
8. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH S1-1 SIGNS.
9. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-2 SIGNS.
10. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-15 SIGNS.
11. INSTALL R1-6a SIGN DOUBLE SIDED WITH POST.
12. INSTALL PUSHBUTTON POST, AND R10-25 SIGN FOR BICYCLES.
13. INSTALL SHORT FLEXIBLE YELLOW DELINEATOR
14. INSTALL DOUBLE YELLOW CENTER STRIPE PER COB STANDARD TC-305
15. INSTALL DETECTABLE WARNING SURFACE PER WSDOT STANDARD F-45.10-03
16. NOT USED THIS SHEET
17. INSTALL 6" PLASTIC LANE LINE.
18. NOT USED THIS SHEET
19. DOTTED EXTENSION LINE PER WSDOT STANDARD M-20.10

CHAD M.A. SCHULHAUSER, STATE OF WASHINGTON, 34846, REGISTERED PROFESSIONAL ENGINEER

24 MAY 2023

No	Date	Revision	By
4			
3			
2			
1			

PROJECT ENGINEER JJB
DESIGNED/DRAWN ELH
INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.
CITY ENGINEER C.A.M.S.
OPERATIONS ENGINEER M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 20'
Vert. 1"= NA

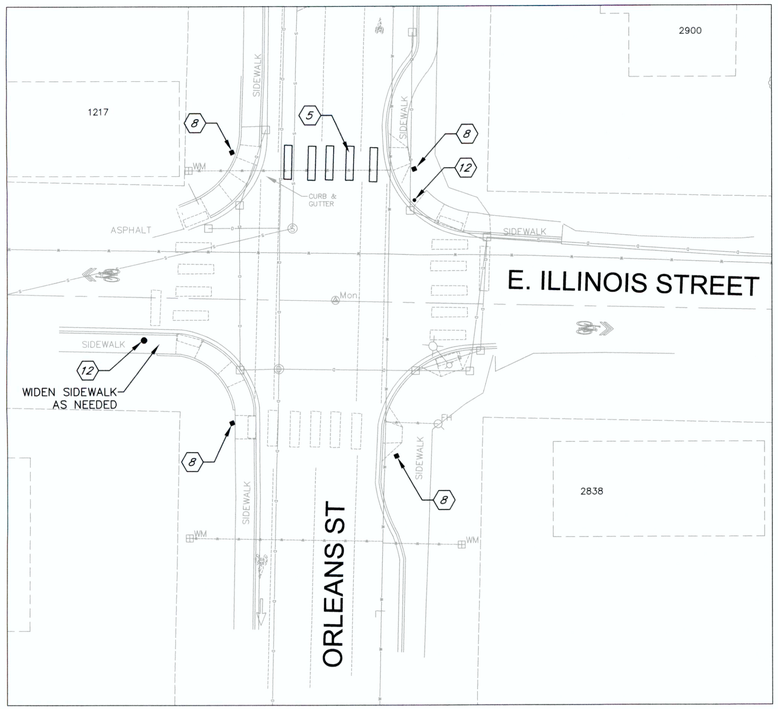
DATUM
NAD 83/98
NAVD 88

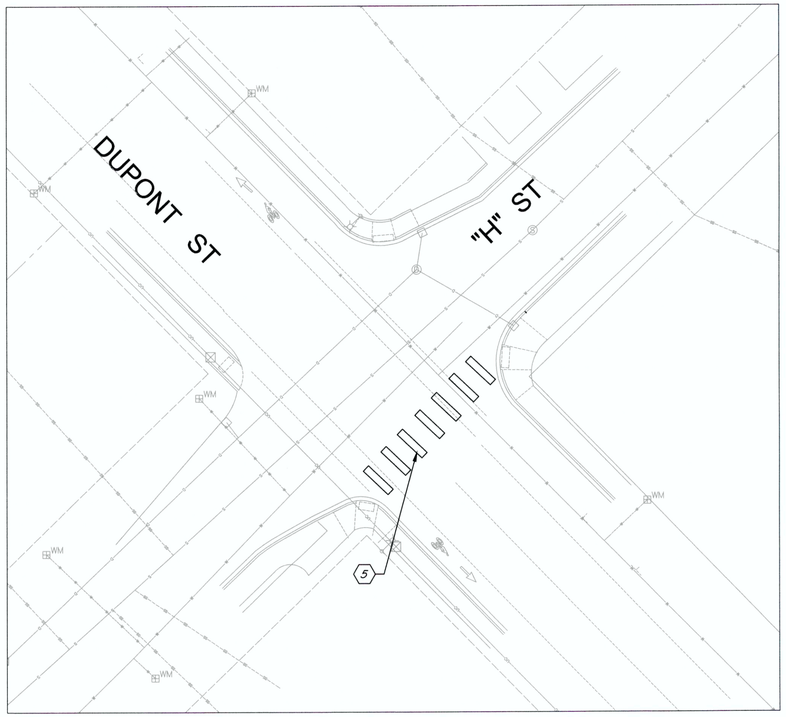
Job. No. ES-0563
Date 02/2023
Field Bk. FB 1068-2

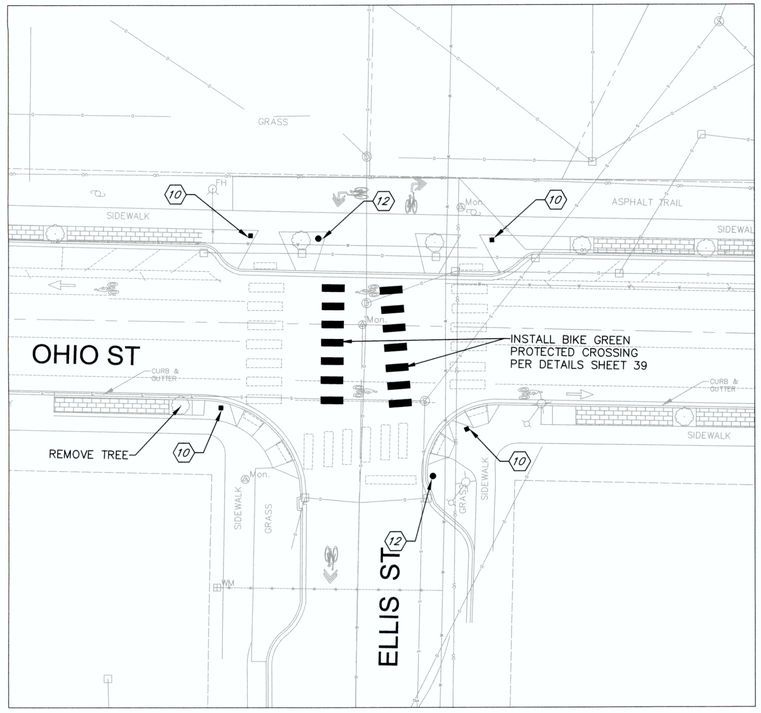
WEST SIDE NON-MOTORIZED IMPROVEMENTS CHANELIZATION & RRFB 4, 5, & 6

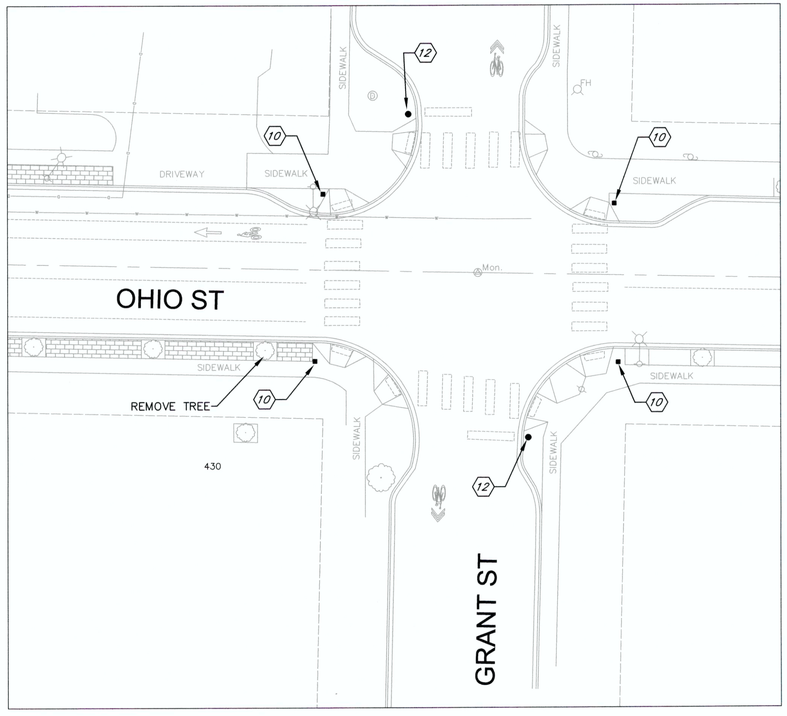
SHEET 36 OF 45

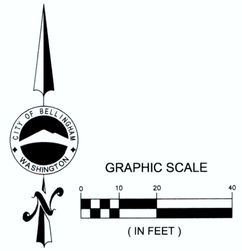
CONTACT PERSON: JESSICA BENNETT, P.E. , PROJECT ENGINEER AT 778-7923











CONSTRUCTION NOTES:

1. INSTALL PLASTIC SHARED LANE SYMBOL AS DIRECTED BY THE ENGINEER
2. INSTALL DESIGNATED BIKE LANE AND ARROW SYMBOLS PER CITY STANDARD PLAN TC-315
3. BIKE LANE STRIPING PER CITY STANDARD TC-315
4. INSTALL BIKE LANE BUFFER WITH HATCHING AND DELINEATORS. SEE DETAIL SHEET 39
5. INSTALL 2'X9' WHITE PLASTIC CROSS-WALK LINES PER WSDOT STANDARD PLAN M-15.10
6. 24" WHITE PLASTIC STOP LINE (BAR) PER CITY STANDARD PLAN TC-310.
7. BUFFER TRANSITION PER DETAIL SHEET 39
8. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH S1-1 SIGNS.
9. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-2 SIGNS.
10. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-15 SIGNS.
11. INSTALL R1-6a SIGN DOUBLE SIDED WITH POST.
12. INSTALL PUSHBUTTON POST, AND R10-25 SIGN FOR BICYCLES.
13. INSTALL SHORT FLEXIBLE YELLOW DELINEATOR
14. INSTALL DOUBLE YELLOW CENTER STRIPE PER COB STANDARD TC-305
15. INSTALL DETECTABLE WARNING SURFACE PER WSDOT STANDARD F-45.10-03
16. NOT USED THIS SHEET
17. INSTALL 6" PLASTIC LANE LINE.
18. NOT USED THIS SHEET
19. DOTTED EXTENSION LINE PER WSDOT STANDARD M-20.10

24 MAY 2023

No	Date	Revision	By
4			
3			
2			
1			

PROJECT ENGINEER JJB
DESIGNED/DRAWN ELH
INSPECTOR DJK

DIRECTOR OF PUBLIC WORKS E.C.J.
CITY ENGINEER C.A.M.S.
OPERATIONS ENGINEER M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 20'
Vert. 1"= NA

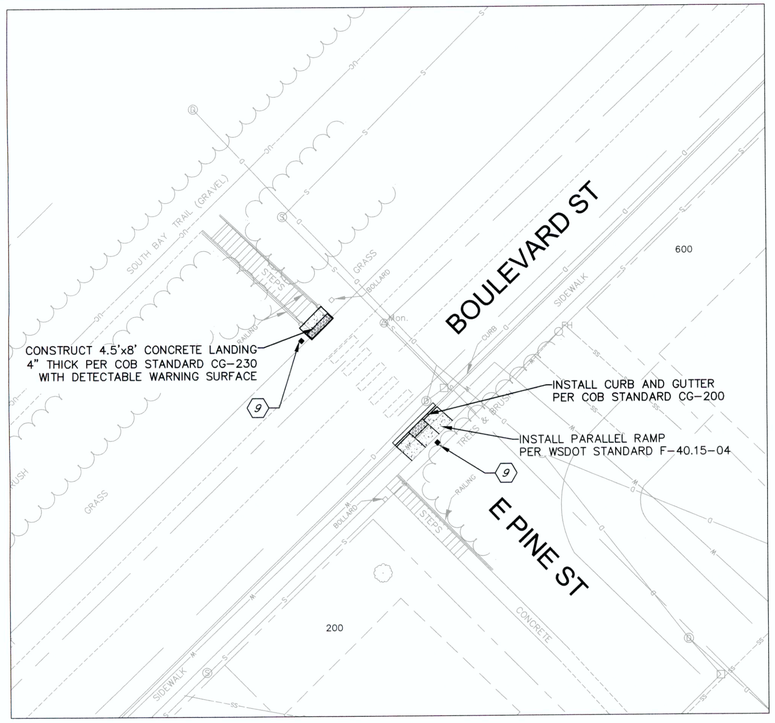
DATUM
NAD 83/98
NAVD 88

Job. No. ES-0563
Date 02/2023
Field Bk. FB 1068-2

WEST SIDE NON-MOTORIZED IMPROVEMENTS CHANELIZATION & RRFB 7 ,8, 11, & 12

SHEET 37 OF 45

CONTACT PERSON: JESSICA BENNETT, P.E. , PROJECT ENGINEER AT 778-7923



GRAPHIC SCALE
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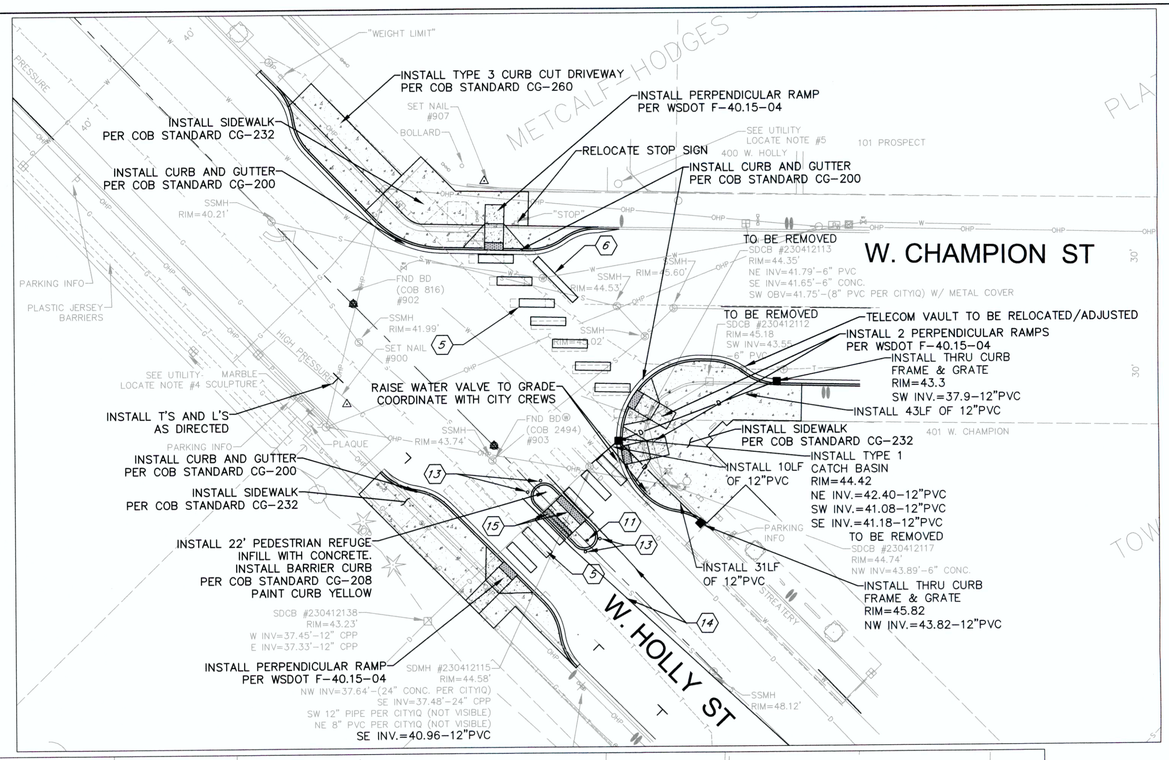
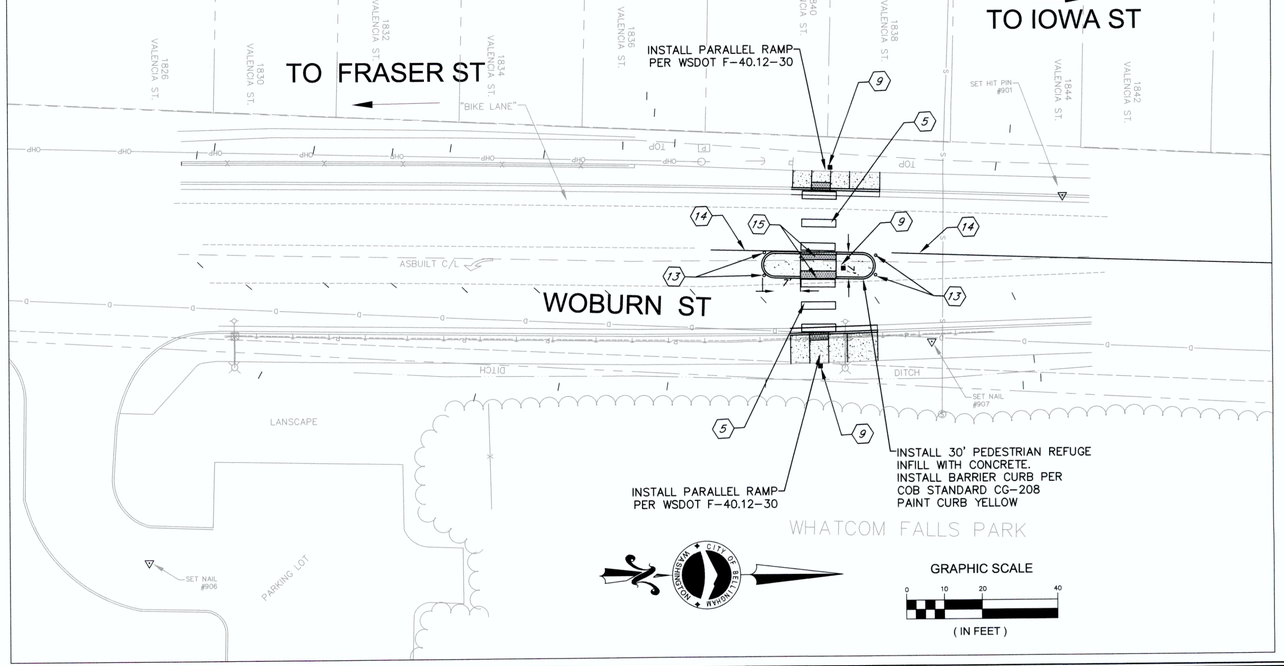
(IN FEET)

CITY OF BELLINGHAM WASHINGTON



CONSTRUCTION NOTES:

1. INSTALL PLASTIC SHARED LANE SYMBOL AS DIRECTED BY THE ENGINEER
2. INSTALL DESIGNATED BIKE LANE AND ARROW SYMBOLS PER CITY STANDARD PLAN TC-315
3. BIKE LANE STRIPING PER CITY STANDARD TC-315
4. INSTALL BIKE LANE BUFFER WITH HATCHING AND DELINEATORS. SEE DETAIL SHEET 39
5. INSTALL 2'X9' WHITE PLASTIC CROSS-WALK LINES PER WSDOT STANDARD PLAN M-15.10
6. 24" WHITE PLASTIC STOP LINE (BAR) PER CITY STANDARD PLAN TC-310.
7. BUFFER TRANSITION PER DETAIL SHEET 39
8. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH S1-1 SIGNS.
9. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-2 SIGNS.
10. INSTALL RECTANGULAR RAPID FLASHING BEACON(RRFB) PER DETAIL SHEET 40 WITH W11-15 SIGNS.
11. INSTALL R1-6a SIGN DOUBLE SIDED WITH POST.
12. INSTALL PUSHBUTTON POST, AND R10-25 SIGN FOR BICYCLES.
13. INSTALL SHORT FLEXIBLE YELLOW DELINEATOR
14. INSTALL DOUBLE YELLOW CENTER STRIPE PER COB STANDARD TC-305
15. INSTALL DETECTABLE WARNING SURFACE PER WSDOT STANDARD F-45.10-03
16. NOT USED THIS SHEET
17. INSTALL 6" PLASTIC LANE LINE.
18. NOT USED THIS SHEET
19. DOTTED EXTENSION LINE PER WSDOT STANDARD M-20.10



GRAPHIC SCALE
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(IN FEET)

Date	No	Revision	By
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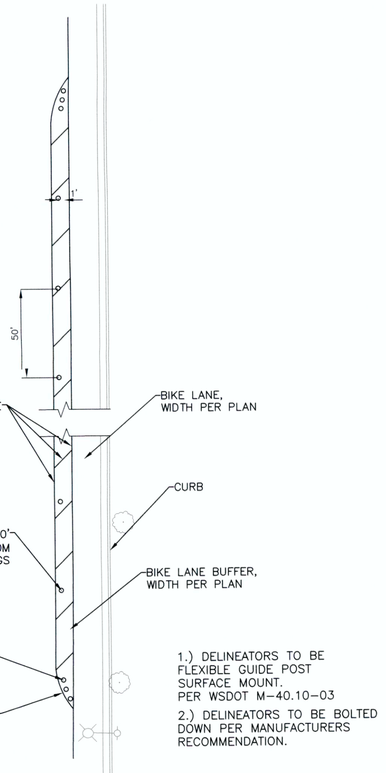
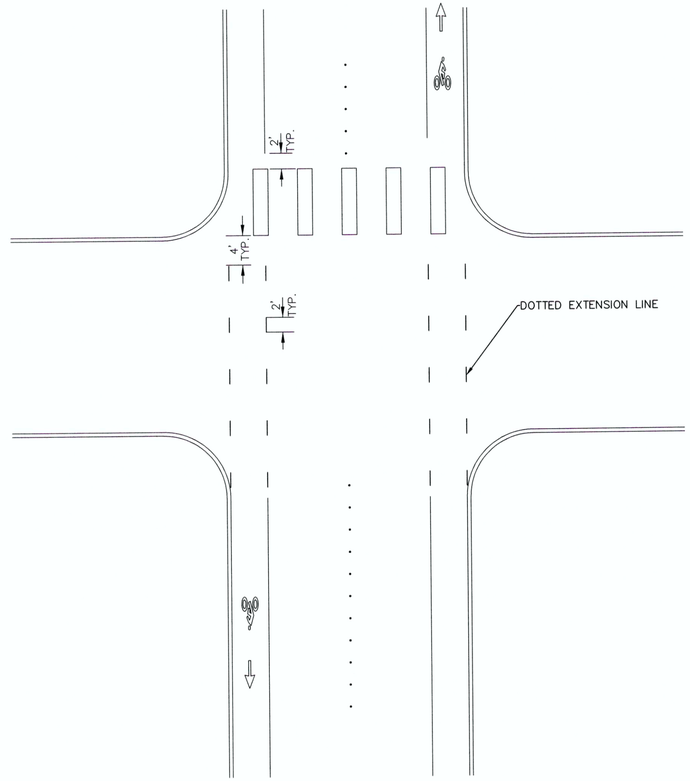
WEST SIDE NON-MOTORIZED IMPROVEMENTS
CHANNELIZATION & RRFB INTERSECTIONS 9, 10, & 13

SHEET 38 OF 45

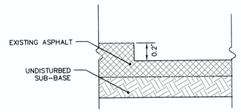
CONTACT PERSON: JESSICA BENNETT, P.E. , PROJECT ENGINEER AT 778-7900



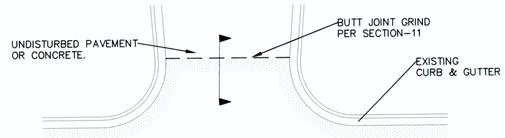
BIKE LANE BUFFER
NTS



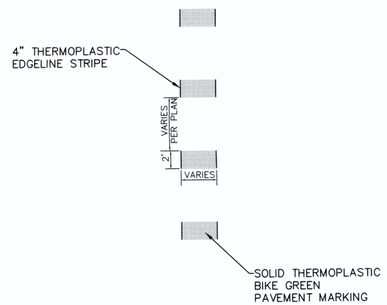
TYPICAL BIKE LANE EXTENSIONS DETAIL - AT CROSSWALK
NTS



BUTT JOINT FOR OVERLAY GRINDING
NTS



TYPICAL BUTT JOINT GRIND AT INTERSECTION
NTS



PROTECTED BIKE STREET CROSSING
NTS

24 may 2023

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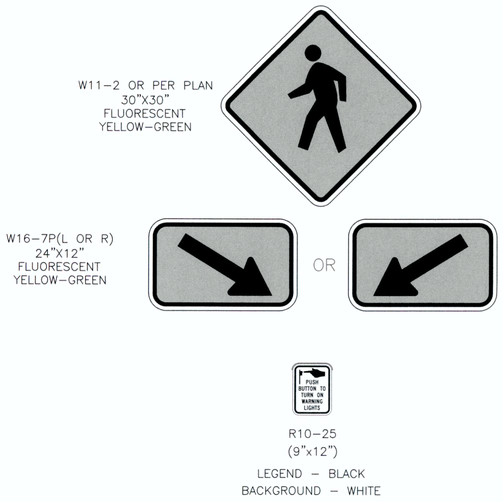
Job. No. ES-0563
Date 02/2023
Field Bk. FB

WESTSIDE NON MOTORIZED IMPROVEMENTS
CHANNELIZATION AND PAVING DETAILS

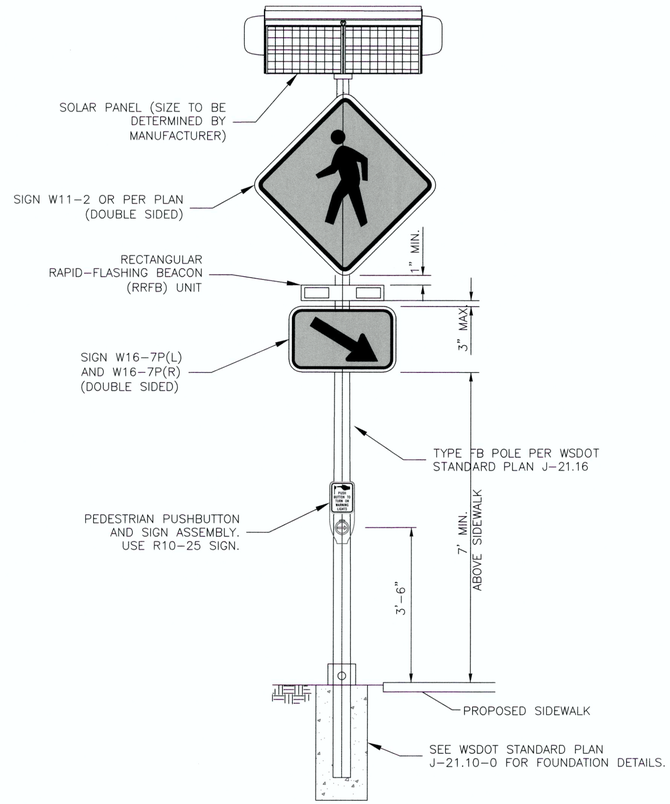
SHEET 39 OF 45

CONTACT PERSON: JESSICA BENNETT, P.E. , PROJECT ENGINEER AT 778-7923

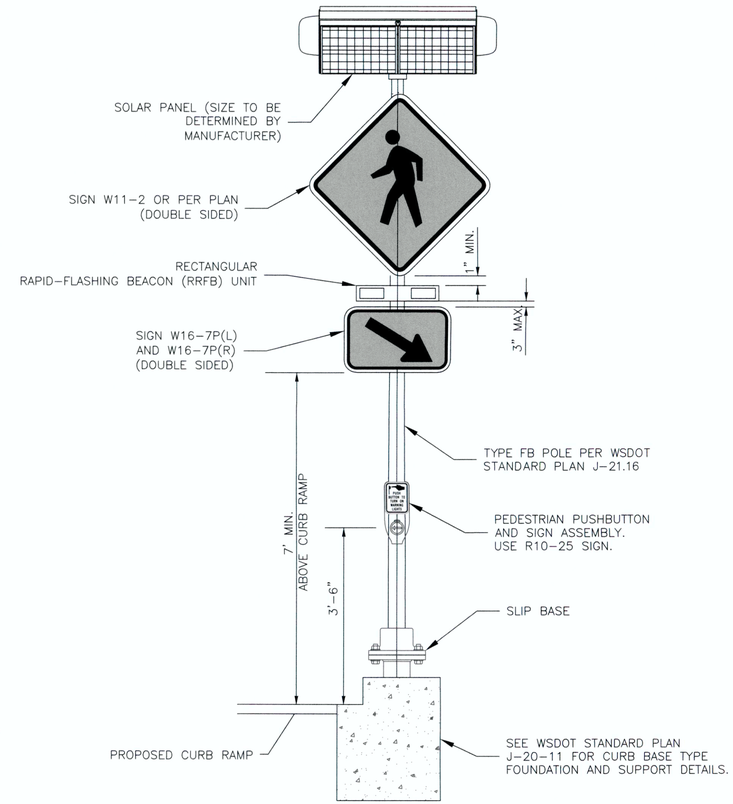


RRFB DETAIL NOTES:

1. RRFB SIGNS, AS SHOWN ON THIS DETAIL AND THE PLANS, SHALL BE PROVIDED BY THE CONTRACTOR.
2. ALL OTHER GROUND-MOUNTED SMALL SIGNS SHALL BE PROVIDED BY THE CITY OF BELLINGHAM.
3. ORIENT SOLAR PANEL PER MANUFACTURER'S RECOMMENDATION.
4. TREE TRIMMING MAY BE REQUIRED FOR OPTIMAL SOLAR PANEL PLACEMENT.
5. PEDESTRIAN PUSHBUTTONS SHALL BE PLACED WITHIN IN 9 INCH REACH FROM CURB RAMP LANDING AREAS, PER ADA ACCESSIBILITY GUIDELINES. THOSE INTENDED FOR BICYCLE USE SHALL BE PLACED 18 INCH REACH FROM FACE OF CURB.
6. THE CONTRACTOR SHALL VERIFY FOUNDATION LOCATIONS ARE FREE OF UTILITY CONFLICTS.
7. WHERE PEDESTRIAN REFUGE PRESENT, INSTALL DOUBLE SIDED RRFB ON REFUGE AND SINGLE SIDED ON EACH SIDE OF THE STREET.
8. ANY PUSHBUTTON SHALL ACTIVATE ALL RRFB'S IN AN INTERSECTION WHEN DUAL CROSSINGS ARE PROVIDED.
9. FINAL SIGN/BUTTON LOCATION WILL BE FIELD VERIFIED TO MEET NECESSARY SIGHT DISTANCE AND ACCESIBLILTY



TYPICAL INSTALLATION



CURB BASE TYPE INSTALLATION

RECTANGULAR RAPID FLASHING BEACON (RRFB) AND SIGN DETAIL

N.T.S.

4			
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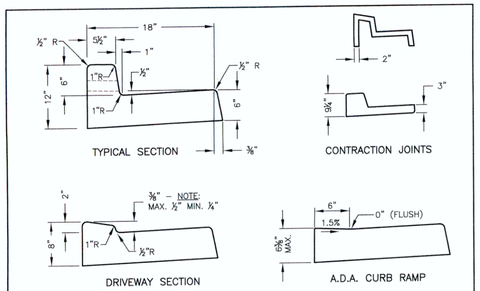
NAVD 88

Job. No. ES-0563
Date 02/2023
Field Bk. FB

WESTSIDE NON MOTORIZED IMPROVEMENTS
RRFB DETAILS

SHEET 40 OF 45

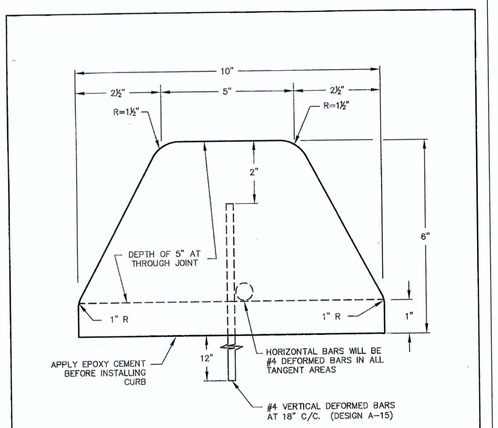
CONTACT PERSON: JESSICA BENNETT , P.E. , PROJECT ENGINEER AT 778-7923



GENERAL NOTES:

1. CONTRACTION JOINTS OF ONE OF THE TYPES SHOWN ABOVE TO BE PLACED 10' C/C. JOINTS MUST COMPLETELY SEVER THE STRUCTURE TO THE POINTS SHOWN. JOINTS MAY BE MADE BY INSERTING MIN. 3/16" BITUMINOUS FILLER DUMMY JOINTS. JOINTS SHALL BE CLEANED AND EDGED.
2. ALL RADII LESS THAN 100' SHALL USE FLEXIBLE WOOD OR METAL FORMS TO ELIMINATE ANGULAR POINTS AT 10' SECTION POINTS.
3. 2"ø PVC SCHD 40 WEEP HOLES TO BE PLACED ON EACH SIDE OF DRIVEWAY SECTION AND AT MAX. OF 60' C/C IN CUT SECTIONS WHERE SIDEWALK DRAIN NOT REQUIRED BY CITY ENGINEER.
4. ¾" EXPANSION JOINTS TO BE PLACED AT DRIVEWAY SECTIONS, CURB RETURNS, CURB RAMPS, & COLD JOINTS OR A MAX. OF 80' C/C. EXPANSION JOINTS SHALL PROTRUDE 1" BELOW THE BOTTOM OF GUTTER.
5. CONCRETE SHALL BE COMMERCIAL CONCRETE CLASS 3000 PER WSDOT SPEC. 6-02.3(2)B.
6. FINISHED WORK SHALL NOT VARY MORE THAN ½-INCH IN GRADE AND ¼-INCH IN ALIGNMENT WHEN CHECKED WITH A 10-FOOT STRAIGHT EDGE.
7. EXPOSED SURFACES SHALL BE BRUSHED WITH A FIBER HAIR BRUSH.
8. WHITE PIGMENTED OR TRANSPARENT CURING COMPOUND SHALL BE APPLIED AS OUTLINED IN THE STANDARD SPECIFICATIONS.
9. FURTHER REQUIREMENTS SHALL BE AS SPECIFIED IN THE STANDARD SPECIFICATIONS.

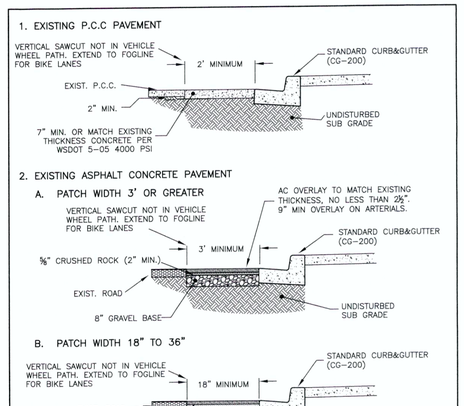
APPROVED	CITY OF BELLINGHAM	DRAWING
City Engineer — 24 MAY 2016 Date	TYPE 'A' MODIFIED CURB AND GUTTER	CG-200



JOINTS:

JOINTS SHALL BE PLACED AT 10' INTERVALS.
JOINTS SHALL BE CUT VERTICALLY AND TO A DEPTH OF 5 INCHES.

APPROVED	CITY OF BELLINGHAM	DRAWING
City Engineer — 11/29/04 Date	EXTRUDED CEMENT CONCRETE CURB	CG-212



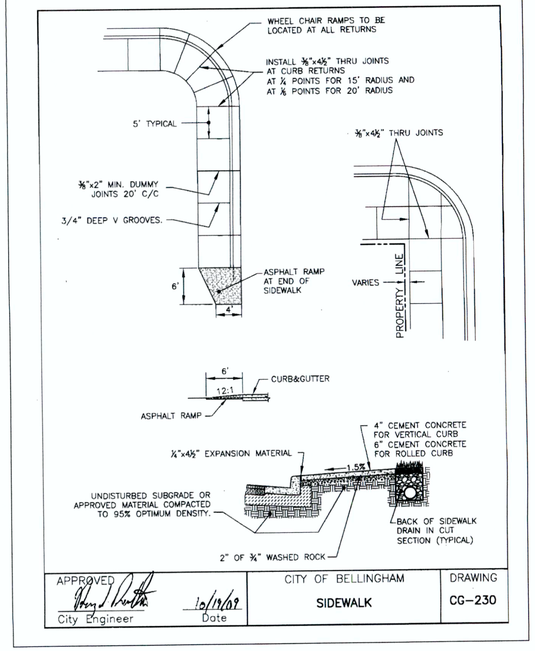
NOTES:

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF BELLINGHAM'S STANDARD SPECIFICATIONS FOR UTILITY CUTS IN STREET AREA.

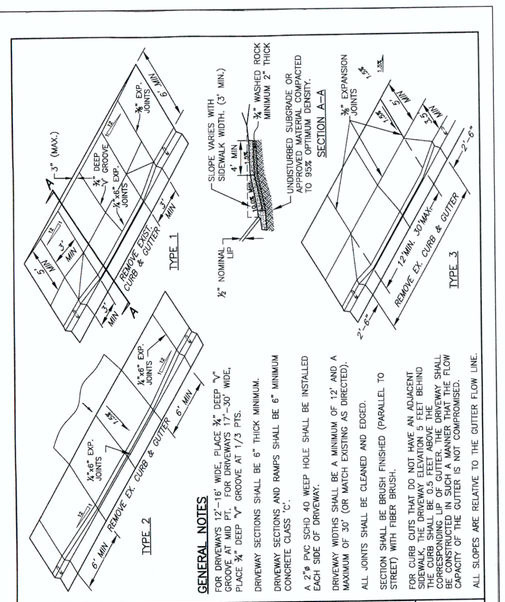
FOR ASPHALT CONCRETE PAVEMENT, TACK ALL EDGES AND HMA BASE SURFACE BEFORE PLACING HMA PAVEMENT. SEAL ALL JOINTS WITH HOT ASPHALT (AR-4000W) BETWEEN EXISTING AND NEW HMA PAVEMENT IMMEDIATELY AFTER FINISH ROLLING.

CONTRACTOR SHALL MATCH EXISTING SURFACES THAT ARE COLORED, TEXTURED, STAMPED OR INLAID WITH BRICK.

APPROVED	CITY OF BELLINGHAM	DRAWING
City Engineer — 15 JUNE 2016 Date	PAVEMENT REPAIR (CURB REPLACEMENT)	CG-218



APPROVED	CITY OF BELLINGHAM	DRAWING
City Engineer — 10/19/09 Date	SIDEWALK	CG-230



GENERAL NOTES

FOR DRIVEWAYS 12'-16' WIDE, PLACE ¾" DEEP "V" GROOVE AT 1/3 POINTS. FOR DRIVEWAYS 17'-30' WIDE, PLACE ¾" DEEP "V" GROOVE AT 1/3 PTS.

DRIVEWAY SECTIONS SHALL BE 6" THICK MINIMUM.

DRIVEWAY SECTIONS AND RAMPS SHALL BE 6" MINIMUM CONCRETE CLASS "C".

A 2"ø PVC SCHD 40 WEEP HOLE SHALL BE INSTALLED EACH SIDE OF DRIVEWAY.

DRIVEWAY WIDTHS SHALL BE A MINIMUM OF 12' AND A MAXIMUM OF 30' (OR MATCH EXISTING AS DIRECTED).

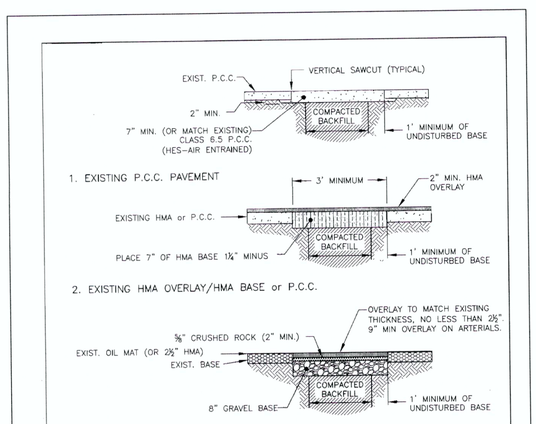
ALL JOINTS SHALL BE CLEANED AND EDGED.

SECTION SHALL BE BRUSH FINISHED (PARALLEL TO STREET) WITH FIBER BRUSH.

FOR CURB CUTS THAT DO NOT HAVE AN ADJACENT SIDEWALK, PROVIDE A FLAT AREA 4 FEET BEHIND THE CURB SHALL BE 0.5 FEET ABOVE THE CORRESPONDING LIP OF GUTTER. THE DRIVEWAY SHALL BE CONSTRUCTED IN SUCH A MANNER THAT THE FLOW CAPACITY OF THE GUTTER IS NOT COMPROMISED.

ALL SLOPES ARE RELATIVE TO THE GUTTER FLOW LINE.

APPROVED	CITY OF BELLINGHAM	DRAWING
City Engineer — 2/22/13 Date	DRIVEWAY SECTIONS	CG-260



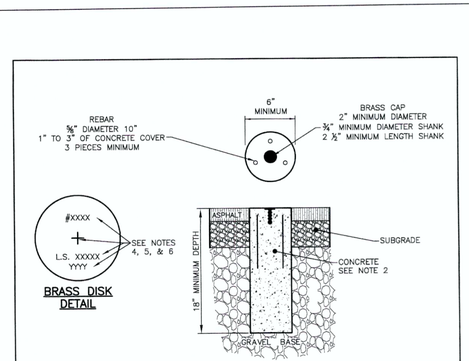
NOTES:

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF BELLINGHAM'S STANDARD SPECIFICATIONS FOR UTILITY CUTS IN STREET AREA.

PAVEMENT OVERLAYS No. 2 AND 3, TACK ALL EDGES AND HMA BASE SURFACE BEFORE PLACING HMA PAVEMENT. SEAL ALL JOINTS WITH HOT ASPHALT (AR-4000W) BETWEEN EXISTING AND NEW HMA PAVEMENT IMMEDIATELY AFTER FINISH ROLLING.

CONTRACTOR SHALL MATCH EXISTING SURFACES THAT ARE COLORED, TEXTURED, STAMPED OR INLAID WITH BRICK.

APPROVED	CITY OF BELLINGHAM	DRAWING
City Engineer — 12/16/09 Date	HORIZONTAL PAVEMENT REPAIR (STREET CROSSINGS)	ST-180



GENERAL NOTES:

1. BRASS DISK TO BE EQUAL TO OR BETTER THAN SURV-KAP MODEL M/M-B2 (2" DIAMETER MIN WITH ¾" DIAMETER x 2" SHANK).
2. EXCAVATION SHALL BE FILLED WITH CLASS 4,000 CONCRETE PER WSDOT STANDARD SPEC. 6-02
3. POSITION BRASS DISK SO THAT PUNCH-MARK FALLS NO CLOSER THAN 2" FROM THE EDGE OF DISK.
4. EXACT LOCATION OF CONTROL POINT SHALL BE PUNCHED AFTER CONCRETE HAS SET.
5. DISK SHALL BE STAMPED WITH CITY ASSIGNED MONUMENT NUMBER, SURVEYOR'S LICENSE NUMBER, AND THE YEAR THE MONUMENT IS PUNCHED (YYYY).
6. IF A PLS MONUMENT, DISK SHALL BE STAMPED ACCORDING TO WAC 332-130-030 AND THE CURRENT BLM MANUAL OF SURVEYING INSTRUCTIONS
7. TIE OUT THE MONUMENT USING TRANSIT TIES WITH DISTANCES AND TWO ANGLES SUBMIT TIE-OUT DOCUMENTATION ON CITY MONUMENT INFORMATION FORM TO CITY PUBLIC WORKS.
8. COMPLETE THE DNR MONUMENT REMOVAL PERMIT PROCESS. (RCW 58.24.040, WAC 332-120).

APPROVED	CITY OF BELLINGHAM	DRAWING
City Engineer — 26 May 2017 Date	CORE MONUMENT IN PAVEMENT NEW OR EXISTING	ST-174

No	Revision	By	Date
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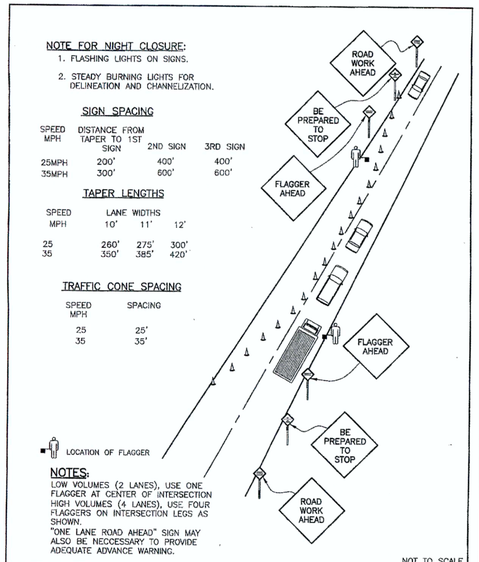
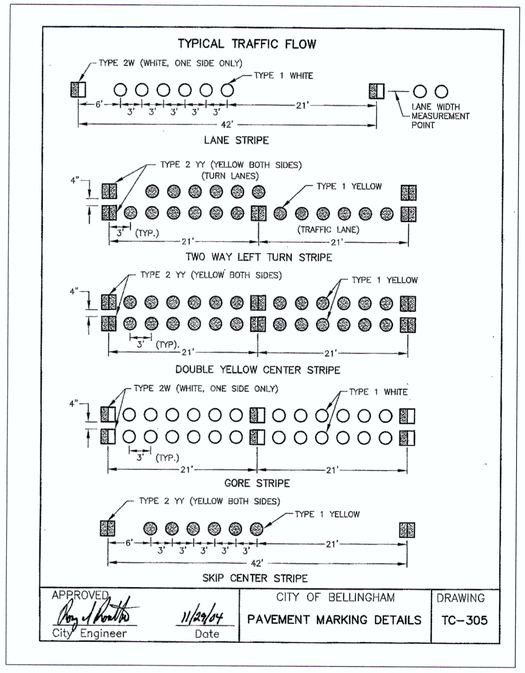
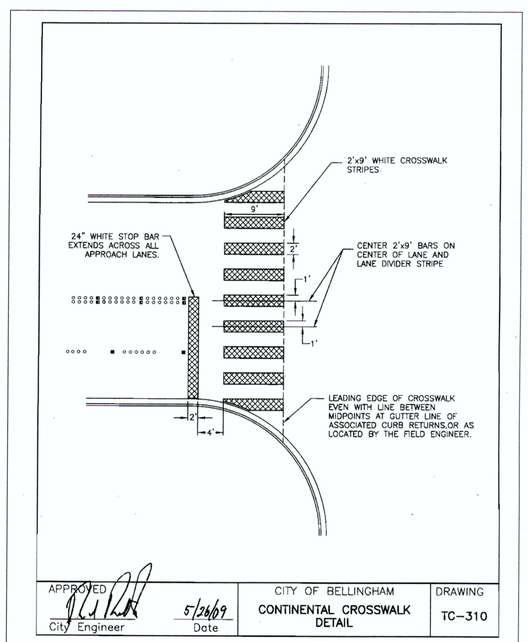
WESTSIDE NON MOTORIZED IMPROVEMENTS
CITY OF BELLINGHAM STANDARD DETAILS

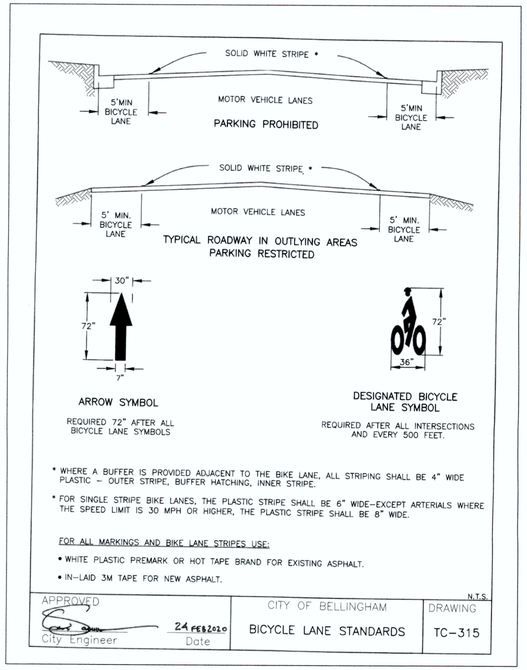
SHEET 41 OF 45

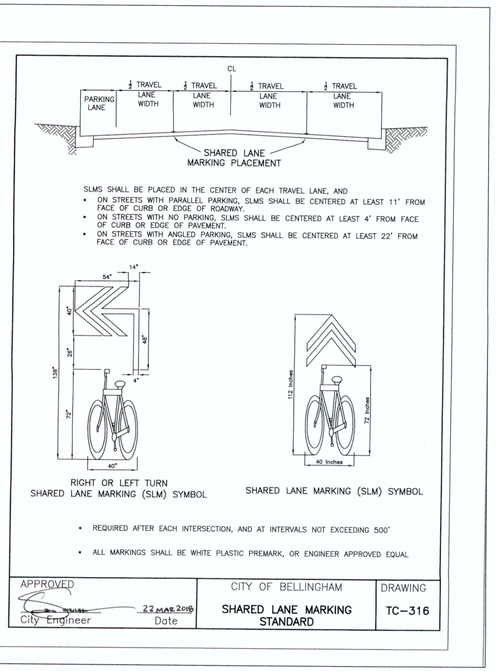
CONTACT PERSON: JESSICA BENNETT, P.E. , PROJECT ENGINEER AT 778-7923

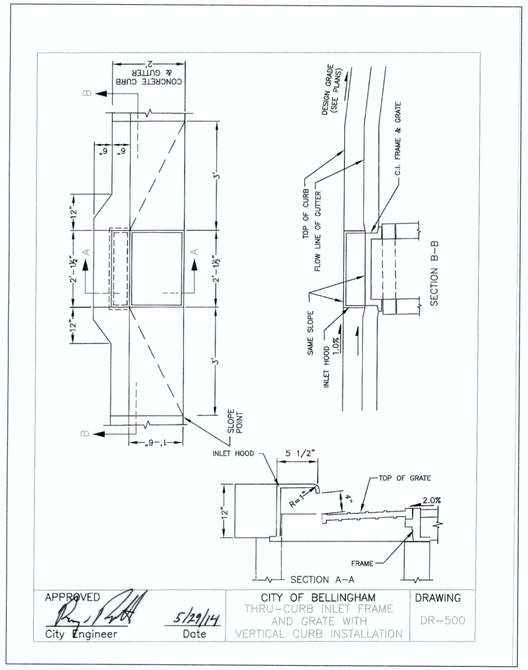


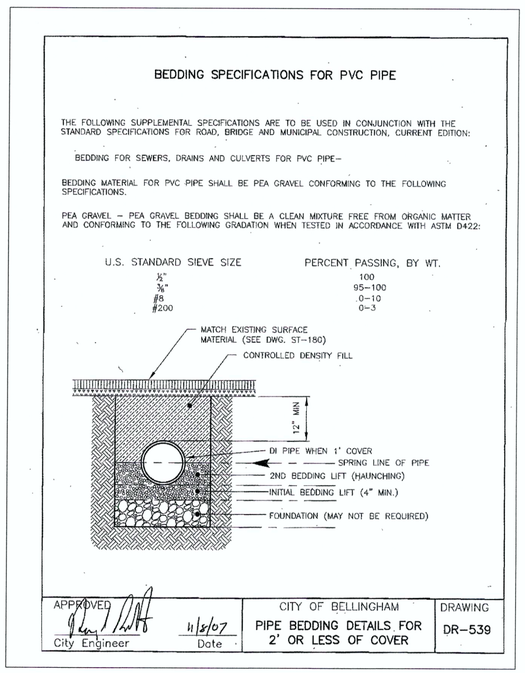












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SHEET 42 OF 45

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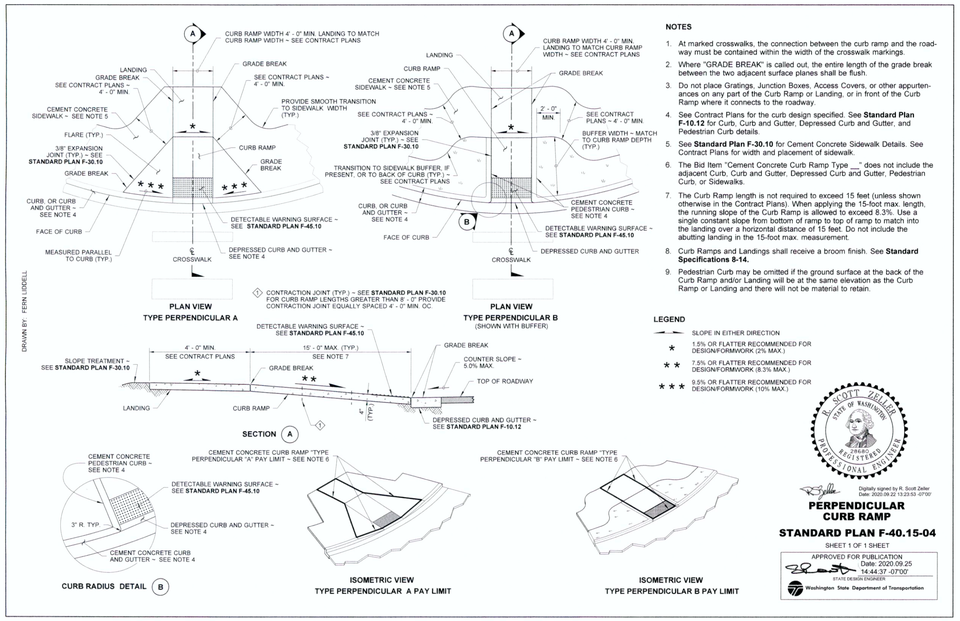

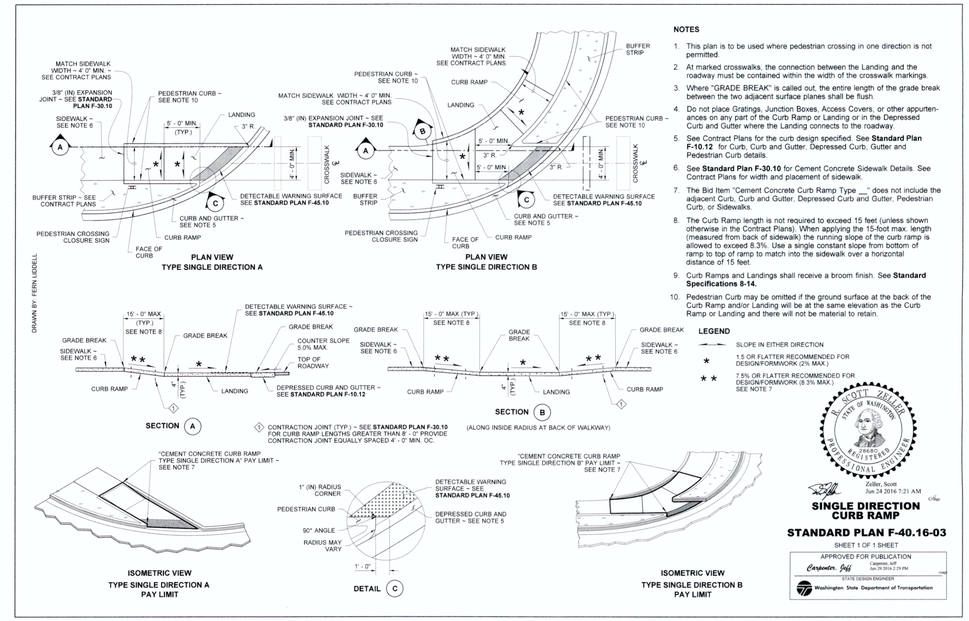

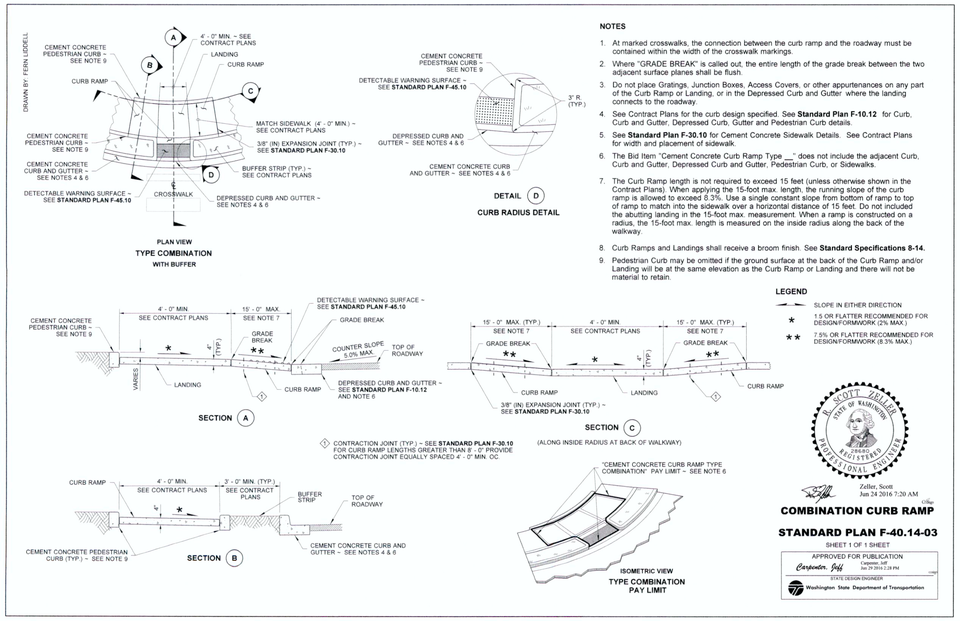

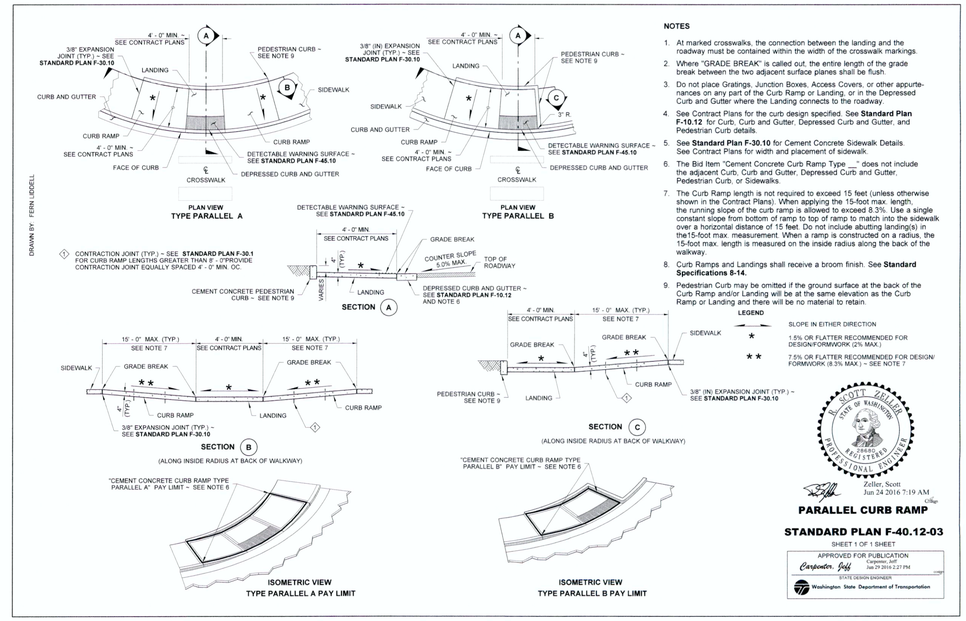

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INSPECTOR ?

DIRECTOR OF PUBLIC WORKS E.C.J.
CITY ENGINEER C.M.A.S.
OPERATIONS ENGINEER M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SCALE
Horiz. 1"= 20'
Vert. 1"= NA

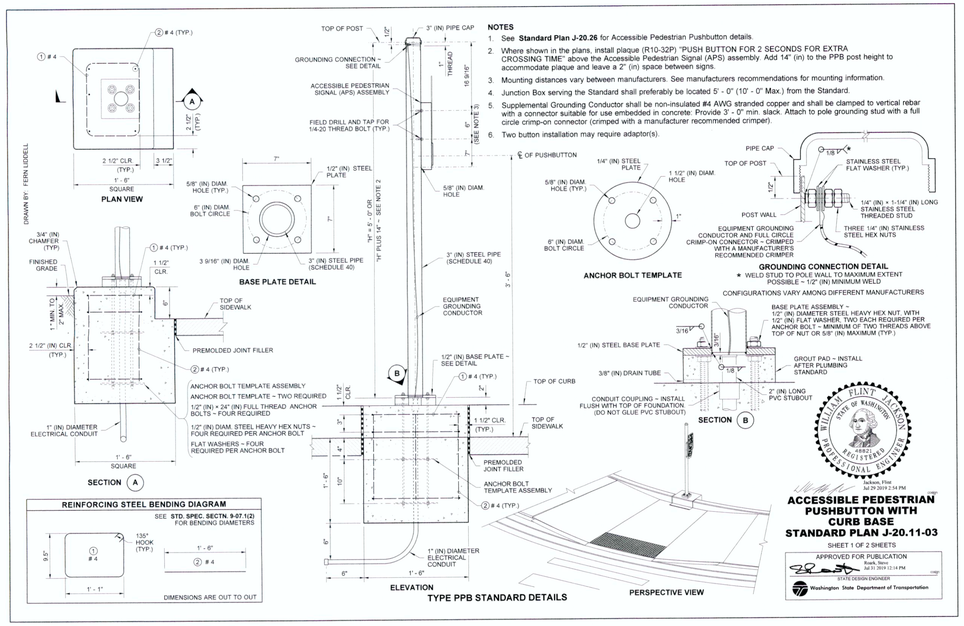
DATUM
NAD 83/98
NAVD 88

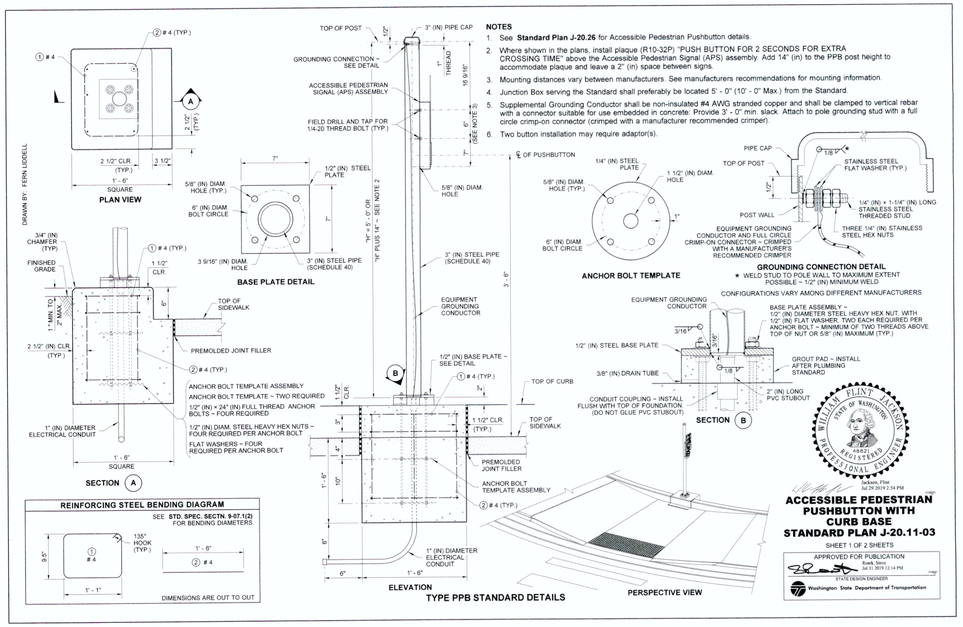
Job. No. ES-0563
Date 02/2023
Field Bk. FB

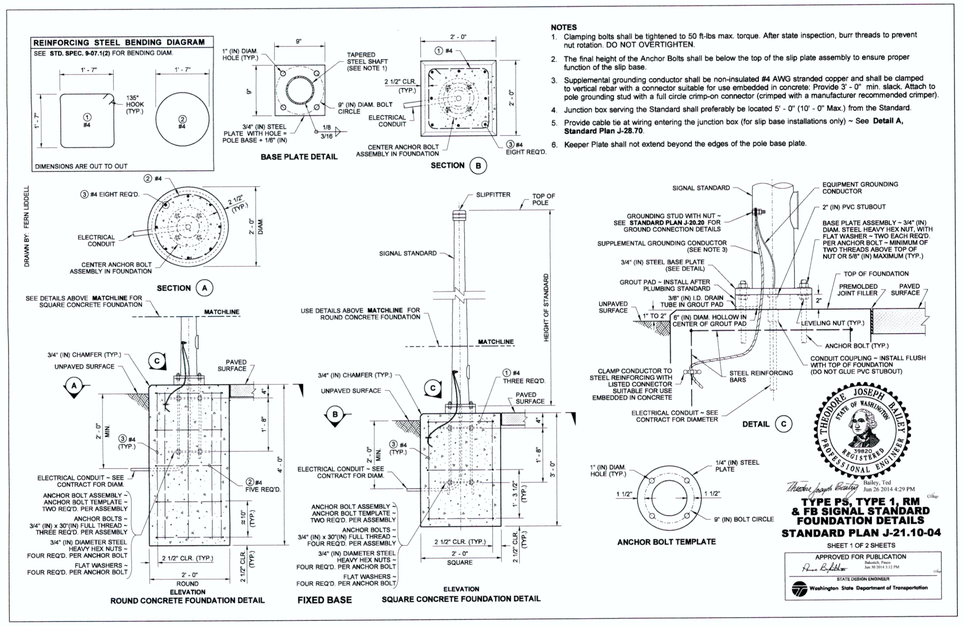
WESTSIDE NON MOTORIZED IMPROVEMENTS
WSDOT STANDARD DETAILS

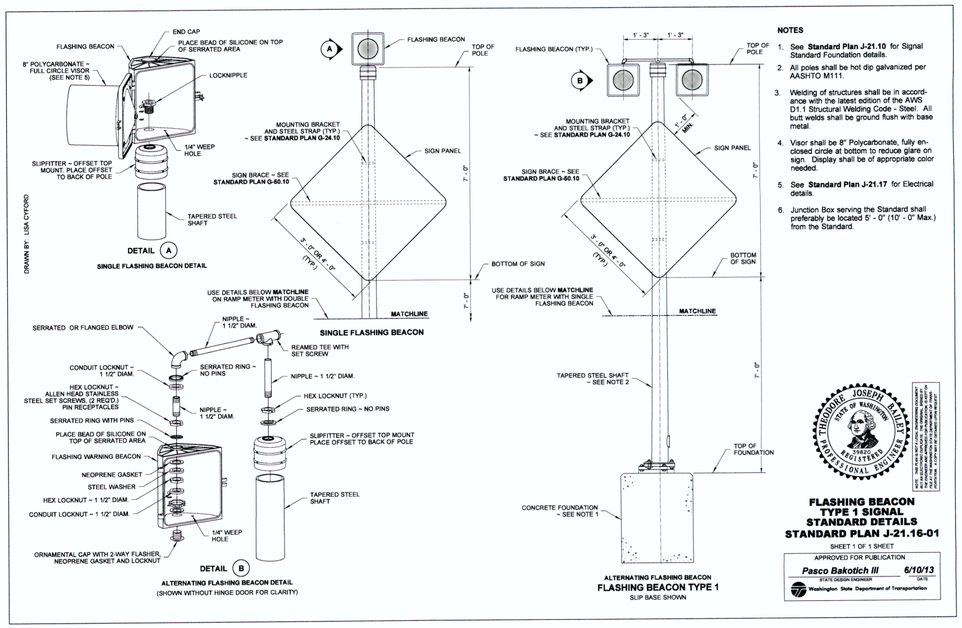
SHEET 43 OF 45

CONTACT PERSON: JESSICA BENNETT , P.E. , PROJECT ENGINEER AT 778-7923









No	Date	Revision	By
4			
3			
2			
1			

PROJECT ENGINEER JJB
DESIGNED/DRAWN ELH
INSPECTOR ?

DIRECTOR OF PUBLIC WORKS E.C.J.
CITY ENGINEER C.M.A.S.
OPERATIONS ENGINEER M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

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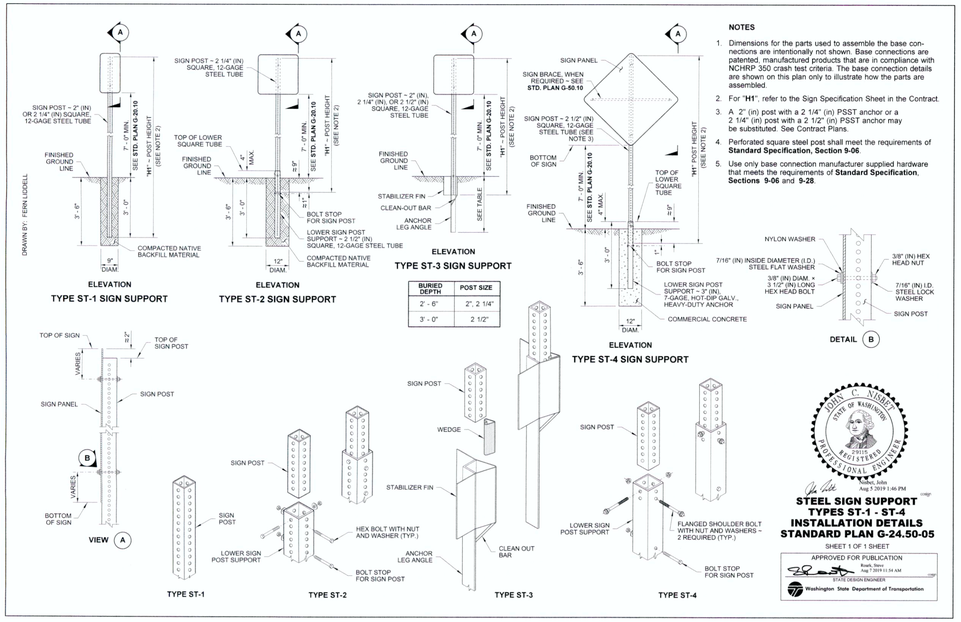
WESTSIDE NON MOTORIZED IMPROVEMENTS
WSDOT STANDARD DETAILS

SHEET 44 OF 45

CONTACT PERSON: JESSICA BENNETT , P.E. , PROJECT ENGINEER AT 778-7923

DRAWN BY: FERN LUDDELL



BURIED DEPTH	POST SIZE
2' - 6"	2", 2 1/4"
3' - 0"	2 1/2"

NOTES

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

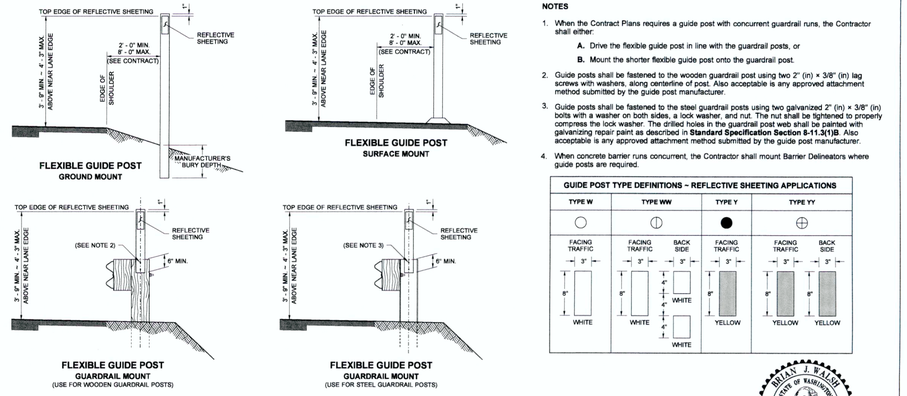
JOHN C. NIGHBERT
STATE OF WASHINGTON
19115
REGISTERED PROFESSIONAL ENGINEER
Nighbert, John
Aug 7 2019 1:46 PM

STEEL SIGN SUPPORT TYPES ST-1 - ST-4 INSTALLATION DETAILS STANDARD PLAN G-24.50-05

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Roark, Steve
Aug 7 2019 11:54 AM
STATE DESIGN ENGINEER
Washington State Department of Transportation

DRAWN BY: LISA OYFORD



NOTES

1. When the Contract Plans requires a guide post with concurrent guardrail runs, the Contractor shall either:
   - **A.** Drive the flexible guide post in line with the guardrail posts, or
   - **B.** Mount the shorter flexible guide post onto the guardrail post.
2. Guide posts shall be fastened to the wooden guardrail post using two 2" (in) × 3/8" (in) lag screws with washers, along centerline of post. Also acceptable is any approved attachment method submitted by the guide post manufacturer.
3. Guide posts shall be fastened to the steel guardrail posts using two galvanized 2" (in) × 3/8" (in) bolts with a washer on both sides, a lock washer, and nut. The nut shall be tightened to properly compress the lock washer. The drilled holes in the guardrail post web shall be painted with galvanizing repair paint as described in **Standard Specification Section 8-11.3(1)B**. Also acceptable is any approved attachment method submitted by the guide post manufacturer.
4. When concrete barrier runs concurrent, the Contractor shall mount Barrier Delineators where guide posts are required.

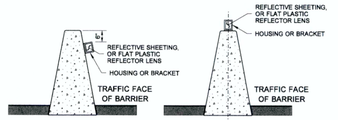
GUIDE POST TYPE DEFINITIONS – REFLECTIVE SHEETING APPLICATIONS

TYPE W	TYPE WW	TYPE Y	TYPE YY
○	◐	●	⊕
FACING TRAFFIC: 3" × 8" WHITE	FACING TRAFFIC: 3" × 8" WHITE; BACK SIDE: 3" × 4" WHITE, 4", 4" WHITE	FACING TRAFFIC: 3" × 8" YELLOW	FACING TRAFFIC: 3" × 8" YELLOW; BACK SIDE: 3" × 8" YELLOW

BARRIER DELINEATOR REQUIREMENTS

- Spacing of Barrier Delineators shall be as shown in the Plans.
- The housing or bracket can be flexible or rigid, molded from a durable plastic or other durable material approved by the Engineer, and shall be attached to the barrier with an adhesive recommended by the manufacturer. The attachment point on the barrier surface shall be free of dirt, curing compound, moisture, paint, or any other matter that would adversely affect the adhesive bond.
- Barrier Delineators shall be one-sided for single direction traffic, or two-sided for bi-directional traffic.
- Color shall be white on the right of traffic, and yellow on the left of traffic.
- The reflective surface shall be rectangular or trapezoidal.
- Reflective Sheeting: 12 square inches minimum surface area; Type III, IV, V, or VI, selected from approved materials listed in the Qualified Products List.
- Plastic Reflector: 9 square inches minimum surface area; acrylic or polycarbonate conforming to AASHTO M 290. Reflectors shall equal or exceed the following minimum values of Specific Intensity:

OBSERVATION ANGLE	ENTRANCE ANGLE	SPECIFIC INTENSITY (cd/ft-c)	
		WHITE	YELLOW
0.1°	0°	126	75
0.1°	20°	50	30



BARRIER DELINEATORS

(CONCRETE BARRIER TYPES AND LOCATIONS VARY, SINGLE SLOPE IN MEDIAN SHOWN)

BRIAN J. WALDEN
STATE OF WASHINGTON
24102
REGISTERED PROFESSIONAL ENGINEER
Walden, Brian
Jun 24 2014 2:07 PM

GUIDE POSTS AND BARRIER DELINEATORS

STANDARD PLAN M-40.10-03

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Rakotch, Peter
Jun 24 2014 4:44 PM
STATE DESIGN ENGINEER
Washington State Department of Transportation

Date	No	Revision	By
	4		
	3		
	2		
	1		

PROJECT ENGINEER JJB
DESIGNED/DRAWN ELH
INSPECTOR ?

DIRECTOR OF PUBLIC WORKS E.C.J.
CITY ENGINEER C.M.A.S.
OPERATIONS ENGINEER M.A.O.

CITY OF BELLINGHAM, WASHINGTON
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

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WSDOT STANDARD DETAILS

SHEET 45 OF 45

CONTACT PERSON: JESSICA BENNETT , P.E. , PROJECT ENGINEER AT 778-7923