

CITY PROJECT
SW0707

SOUTHEAST INTERCEPTOR MURPHY ROAD SEGMENT

SCHEDULE A: MURPHY SEWER

SCHEDULE B: TIMBER RIDGE TO MURPHY PUMP STATION WATERLINE*

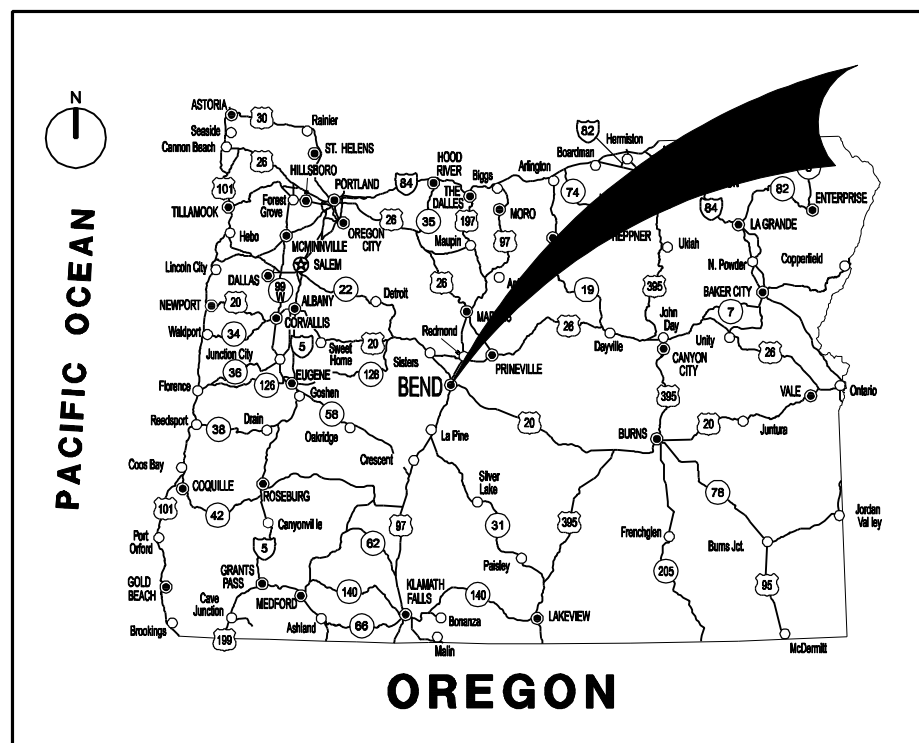
SCHEDULE C: SOUTH BROSTERHOUS SEWER

SCHEDULE D: NORTH BROSTERHOUS SEWER

BEND, OREGON

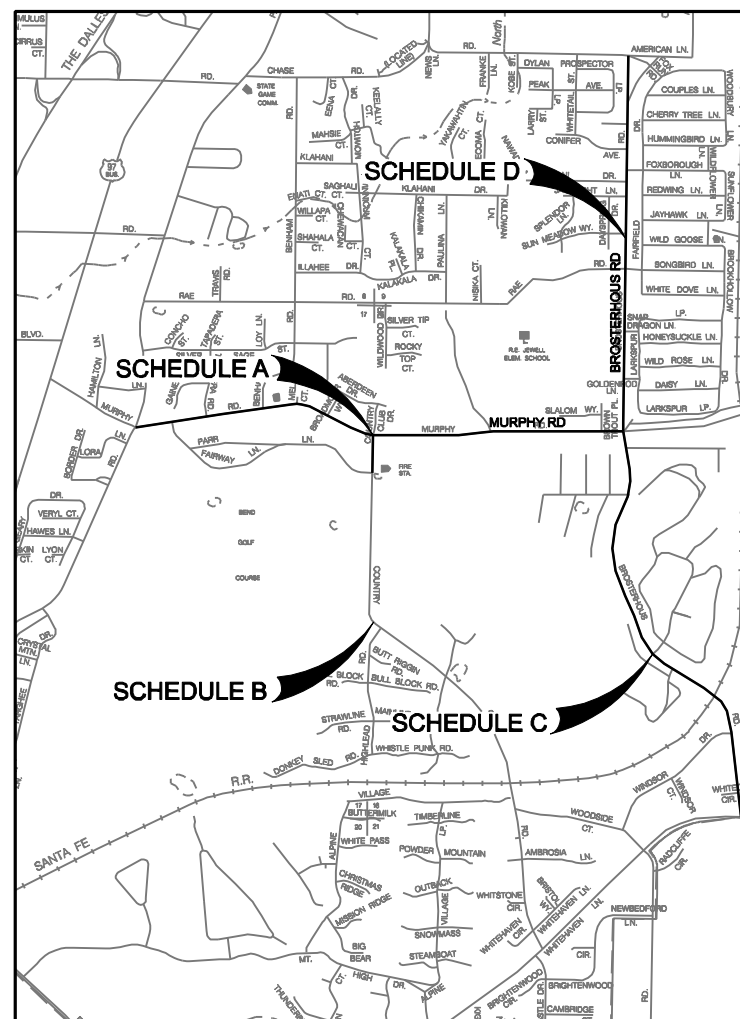
△ VOLUME III

△ CONFORMED DRAWINGS



LOCATION MAP
NTS

FOR SIGNATURES AND SEALS REFER
TO ORIGINAL DRAWINGS, DATED DEC 2009
CITY OF BEND ENGINEER



VICINITY MAP
NTS

INDEX TO DRAWINGS

SHEET NO.	DRAWING NO.	TITLE
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CIVIL		
3	05-C-001	KEYMAP
4	05-C-002	OVERALL PROFILES
5	05-HC-101	HORIZONTAL CONTROL
6	05-HC-102	HORIZONTAL CONTROL
7	05-HC-103	HORIZONTAL CONTROL
8	05-HC-104	HORIZONTAL CONTROL
9	05-HC-105	HORIZONTAL CONTROL
10	05-HC-106	HORIZONTAL CONTROL
11	05-HC-107	HORIZONTAL CONTROL
12	05-CY-001	MURPHY ROAD SANITARY SEWER PLAN AND PROFILE
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15	05-CY-004	MURPHY ROAD SANITARY SEWER PLAN AND PROFILE
16	05-CY-005	MURPHY ROAD SANITARY SEWER PLAN AND PROFILE
17	05-CY-006	MURPHY ROAD SANITARY SEWER PLAN AND PROFILE
18	05-CY-007	MURPHY ROAD SANITARY SEWER PLAN AND PROFILE
19	05-CY-008	MURPHY ROAD SANITARY SEWER PLAN AND PROFILE
20	05-CY-009	MURPHY ROAD SANITARY SEWER PLAN AND PROFILE
21	05-CY-010	MURPHY ROAD SANITARY SEWER PLAN AND PROFILE
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23	05-CY-012	MURPHY ROAD SANITARY SEWER PLAN AND PROFILE
24	05-CY-013	MURPHY ROAD SANITARY SEWER PLAN AND PROFILE
25	05-CY-014	MURPHY ROAD SANITARY SEWER PLAN AND PROFILE
26	05-CY-015	BROSTERHOUS ROAD (SOUTH) SANITARY SEWER PLAN AND PROFILE
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30	05-CY-019	BROSTERHOUS ROAD (SOUTH) SANITARY SEWER PLAN AND PROFILE
31	05-CY-020	BROSTERHOUS ROAD (SOUTH) SANITARY SEWER PLAN AND PROFILE
32	05-CY-021	BROSTERHOUS ROAD (SOUTH) SANITARY SEWER PLAN AND PROFILE
33	05-CY-022	BROSTERHOUS ROAD (SOUTH) SANITARY SEWER PLAN AND PROFILE
34	05-CY-023	BROSTERHOUS ROAD (SOUTH) SANITARY SEWER PLAN AND PROFILE
35	05-CY-024	BROSTERHOUS ROAD (NORTH) SANITARY SEWER PLAN AND PROFILE
36	05-CY-025	BROSTERHOUS ROAD (NORTH) SANITARY SEWER PLAN AND PROFILE
37	05-CY-026	BROSTERHOUS ROAD (NORTH) SANITARY SEWER PLAN AND PROFILE
38	05-CY-027	BROSTERHOUS ROAD (NORTH) SANITARY SEWER PLAN AND PROFILE
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ELECTRICAL		
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45	90-E-601	ONE-LINE AND BLOCK DIAGRAMS

* SCHEDULE B DRAWINGS BEHIND SHEET 45

FOR SIGNATURES AND SEALS REFER TO ORIGINAL DRAWINGS, DATED DEC 2009

NO.	DATE	BY	APPROVED-BY
1	3/11/2010	JSS	J. McMADE
2	1/19/2010	JSS	R. LUKE
3			J. STALLARD
4			DR
5			CHK
6			REVISION
7			CONFORMED SET
8			ADDENDUM #1

SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

GENERAL
LOCATION MAP, VICINITY MAP
AND INDEX TO DRAWINGS

DATE	MARCH 2010
PROJ	362936
DWG	01-G-001
SHEET	1 OF 45



CONVEYANCE LEGEND

EXISTING	PROPOSED	ITEM
		EXISTING ROADWAY CENTERLINE (C)
		EDGE OF ASPHALT / TOP OF CURB
		SANITARY SEWER
		STORM DRAIN
		WATER MAIN OR SERVICE
		UNDER GROUND POWER
		VALVE
		FIRE HYDRANT
		COMBINATION AIR RELEASE VALVE WITH SIZE
		MANHOLE
		PROPERTY AND/OR RIGHT-OF-WAY LINE
		DRAINAGE WAY OR DITCH
		CONTROL POINT
		CONTOUR
		SPOT ELEVATION
		FINISH GRADE ELEVATION
		SOIL BORING
		FENCE LINE
		BLIND FLANGE, CAP OR PLUG
		METER
		WATER METER
		CULVERT WITH SIZE AND TYPE
		STORM DRAIN CATCH BASIN
		STORM DRAIN INLETS
		GAS PIPELINE
		OVERHEAD POWER AND TELEPHONE
		UNDERGROUND TELEPHONE
		OVERHEAD TELEPHONE
		UNDERGROUND TELEVISION CABLE
		UNDERGROUND FIBER OPTIC CABLE
		UNDERGROUND ELECTRICAL LINE
		UTILITY POLE/POWER POLE
		POLE GUY WIRE
		UTILITY BOX
		LUMINAIRE
		SANITARY SEWER CLEANOUT
		SIGN
		TREE (SIZE & SPECIES IF KNOWN)
		TREE TO BE REMOVED
		POTHOLE LOCATION
		IRON ROD CONTROL
		ODOT ALUMINUM CAP

NOTE:
IN GENERAL, EXISTING STRUCTURES AND UTILITIES ARE NOTED AS "EXISTING." NEW MODIFICATIONS ARE SHOWN IN HEAVY (NON-SHADED) LINE WEIGHTS.

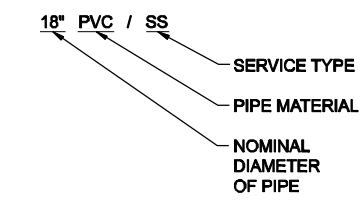
SECTION AND DETAIL IDENTIFICATION

SECTION AND DETAIL DESIGNATORS



SECTION (LETTER) OR DETAIL (NUMBER) DESIGNATION

DRAWING NUMBER WHERE DETAIL CAN BE FOUND

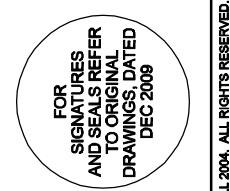


ABBREVIATIONS

@	ALUM	ALUMINUM
AVE	AVE	AVENUE
BOT	BOT	BOTTOM
CIP	CIP	CAST IRON PIPE
CMP	CMP	CORRUGATED METAL PIPE
CONC	CONC	CONCRETE
CTRL	CTRL	CONTROL
DIA	DIA	DIAMETER
DIP	DIP	DUCTILE IRON PIPE
DR	DR	DRIVE OR DIMENSION RATIO
E	E	EAST
EL	EL	ELEVATION
EXST	EXST	EXISTING
EW	EW	EACH WAY
FM	FM	FORCE MAIN
FO	FO	FIBER OPTIC
G	G	GAS
GM	GM	GRAVITY MAIN
HDPE	HDPE	HIGH DENSITY POLYETHYLENE
HORIZ	HORIZ	HORIZONTAL
I.E., INV	I.E., INV	INVERT ELEVATION
IP	IP	IRON POST
IR	IR	IRON ROD, IRRIGATION
LT	LT	LEFT
MAX	MAX	MAXIMUM
MH	MH	MANHOLE
MIN	MIN	MINIMUM
MJ	MJ	MECHANICAL JOINT
N	N	NORTH
NCP	NCP	NONREINFORCED CONCRETE PIPE
NO	NO	NUMBER
NTS	NTS	NOT TO SCALE
OC	OC	ON CENTER
OD	OD	OUTSIDE DIAMETER
OHP	OHP	OVERHEAD POWER
PE	PE	PERMANENT EASEMENT
PK/WSHR	PK/WSHR	PK NAIL WITH WASHER
PL	PL	PROPERTY LINE
PP	PP	POWER POLE
PVC	PVC	POLYVINYLCHLORIDE
RCP	RCP	REINFORCED CONCRETE PIPE
RD	RD	ROAD
REQD	REQD	REQUIRED
RJ	RJ	RESTRAINED JOINT
RT	RT	RIGHT
RR	RR	RAILROAD
R/W	R/W	RIGHT OF WAY
S	S	SOUTH
SD	SD	STORM DRAIN
SDR	SDR	STANDARD DIMENSION RATIO
SN	SN	SEWER MANHOLE NUMBER
SPEC'D	SPEC'D	SPECIFIED
SS	SS	SANITARY SEWER
SSS	SSS	SANITARY SIDE SEWER
SST	SST	STAINLESS STEEL
STA	STA	STATION
T, TEL	T, TEL	TELEPHONE
TE	TE	TEMPORARY EASEMENT
TV	TV	TELEVISION
TYP	TYP	TYPICAL
UE	UE	UNDERGROUND ELECTRICAL
UGP	UGP	UNDERGROUND POWER
UT	UT	UNDERGROUND TELECOM
UW	UW	UNDERGROUND WATER
VERT	VERT	VERTICAL
W	W	WATER, WEST
W/	W/	WITH
WT	WT	WEIGHT

GENERAL NOTES

- ALL CONSTRUCTION SHALL CONFORM TO CITY STANDARDS AND SPECIFICATIONS.
- CITY ENGINEER'S SIGNATURE DOES NOT GRANT APPROVAL TO COMMENCE CONSTRUCTION.
- ATTENTION: OREGON LAW REQUIRES YOU FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THE RULES BY CALLING THE CENTER. (OREGON UTILITY NOTIFICATION CENTER PHONE # IS (503) 232-1987 OR 1-800-332-2344)
- 'GEOTECHNICAL RECOMENDATIONS REPORT BEND SE INTERCEPTOR, MURPHY ROAD SECTION' INCLUDED IN BID DOCUMENTS.
- EXISTING GRADE FROM GPS SURVEY VERTICAL ACCURACY +/- 0.2'
- REPLACE ALL DAMAGED CURBS AND LANDSCAPING TO MATCH EXISTING.
- SURFACE RESTORATION FOR ALL SCHEDULES A, CL, C2, AND D IN PAVEMENT AREAS SHALL INCLUDE COMPLETE PAVEMENT SECTION REMOVAL FROM CURB TO CURB AND RECONSTRUCTION OF FULL PAVEMENT SCHEDULE SECTION PER CITY OF BEND STANDARD DETAIL R-L FOR A COLLECTOR STREET.
- SURFACE RESTORATION FOR SCHEDULE B (OUTSIDE OF SCHEDULE A WORK AREA) IN PAVEMENT AREAS SHALL MEET CITY OF BEND STANDARD DETAIL R-10.



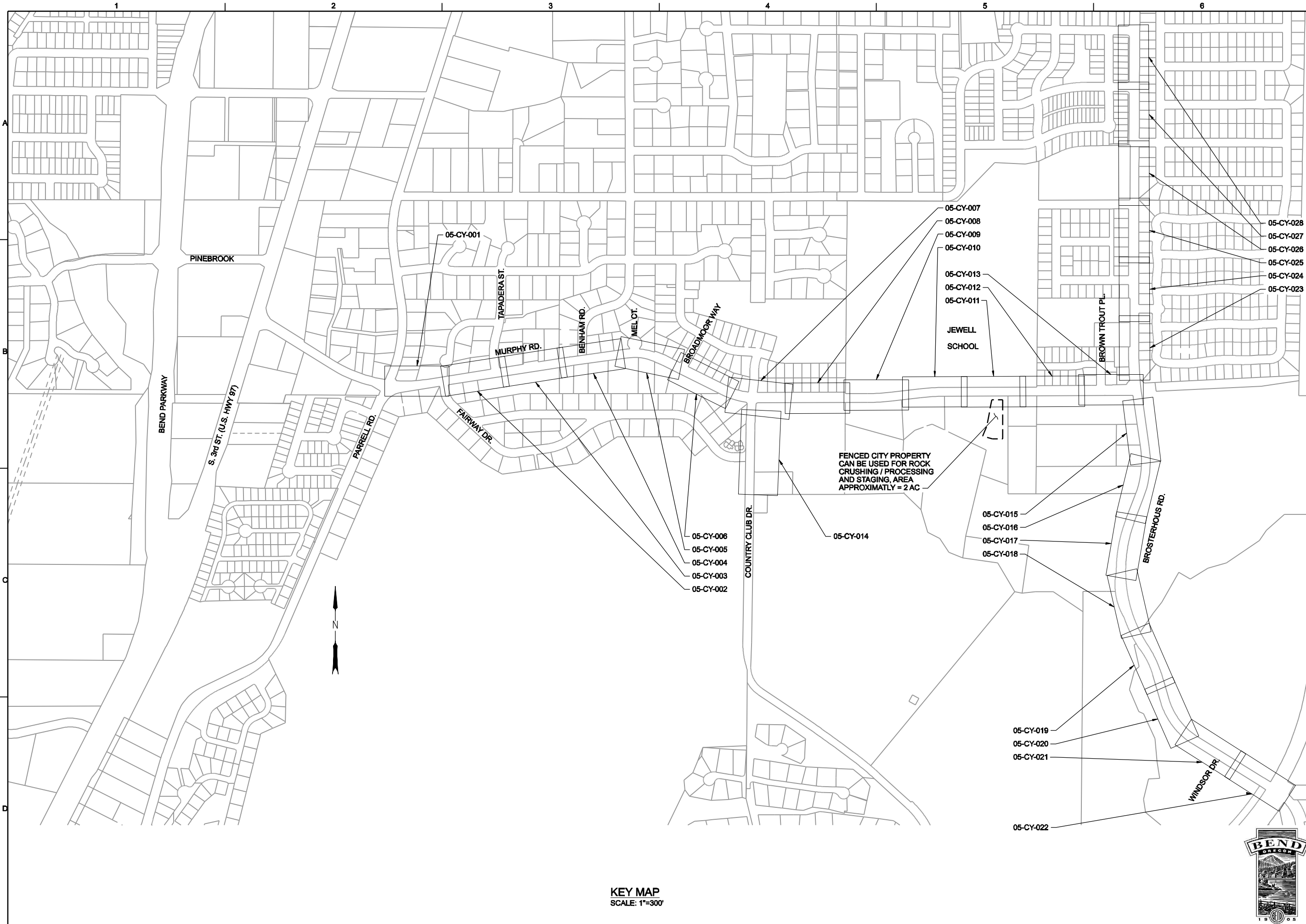
NO.	DATE	BY	APPROVED-BY
1	1/19/2010	R. LUKE	J. McMADE
		DR	APVD

SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

GENERAL
GENERAL NOTES,
ABBREVIATIONS AND LEGEND



VERIFY SCALE	
DATE	MARCH 2010
PROJ	362936
DWG	01-G-002
SHEET	2 OF 45



KEY MAP
SCALE: 1"=300'



FOR SIGNATURES AND SEALS REFER TO ORIGINAL DRAWINGS, DATED DEC 2009

NO.	DATE	DR	REVISION	CHK	APVD	BY	APVD
		J. STALLARD		R. LUKE	J. McMADE		APPROVED-BY

CH2MHILL
CIVIL
KEY MAP

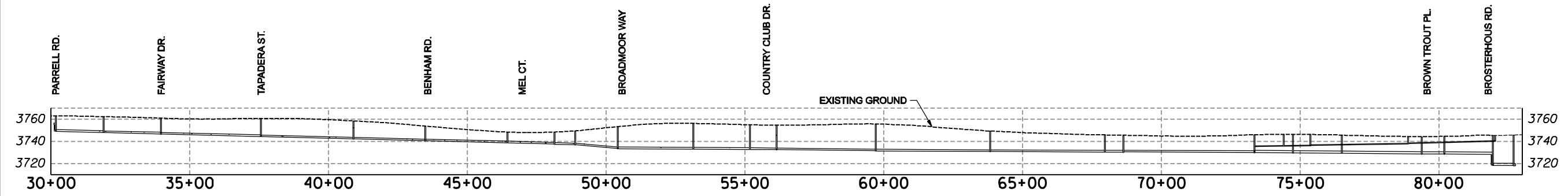
SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1'

DATE: MARCH 2010
PROJ: 362936
DWG: 05-C-001
SHEET: 3 OF 45

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SCHEDULE A

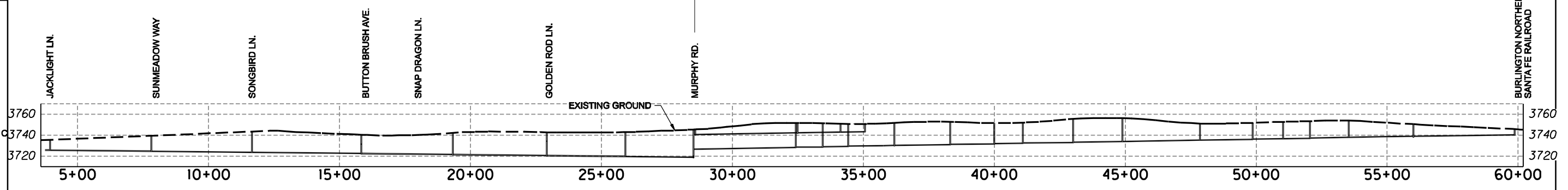


**SE INTERCEPTOR MURPHY ROAD SEGMENT
OVERALL PROFILE**
SCALE: 1"=200' HORIZ.
1"=50' VERT.

SCHEDULE D

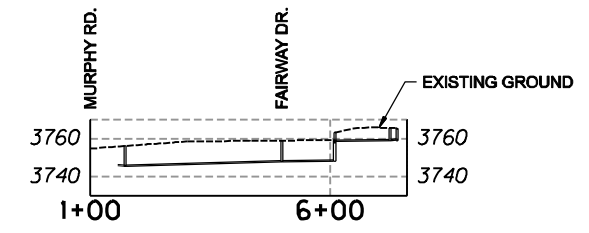


SCHEDULE C



**SE INTERCEPTOR BROSTERHOUS ROAD SEGMENT
OVERALL PROFILE**
SCALE: 1"=200' HORIZ.
1"=50' VERT.

SCHEDULE A



**SE INTERCEPTOR COUNTRY CLUB DRIVE SEGMENT
OVERALL PROFILE**
SCALE: 1"=200' HORIZ.
1"=50' VERT.

FOR
SIGNATURES
AND SEALS REFER
TO ORIGINAL
DRAWINGS, DATED
DEC 2009

NO.	DATE	DR	REVISION	BY	APPROVED-BY
			CHK	R. LUKE	J. McMADE
					APVD

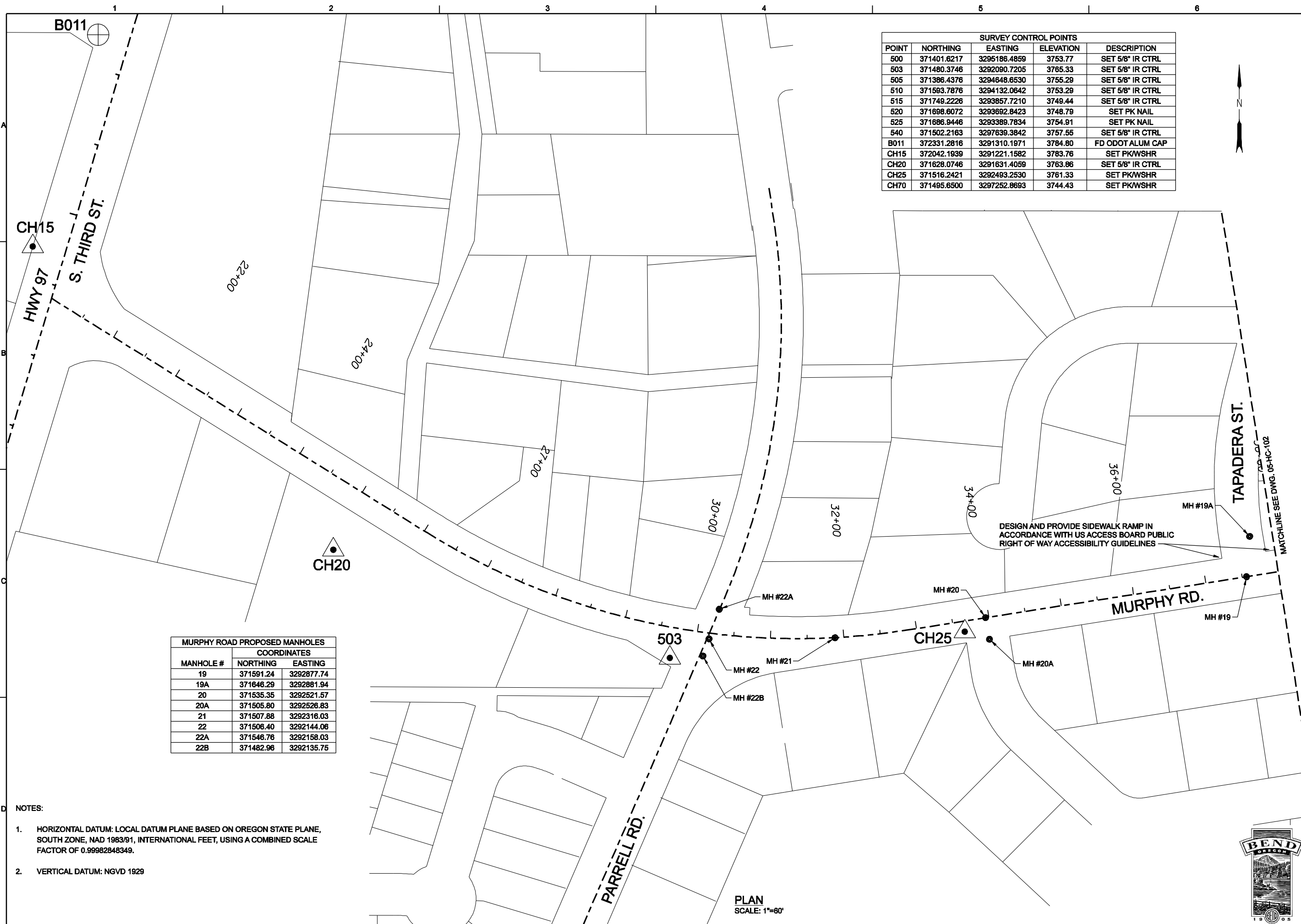
CH2MHILL
CIVIL
OVERALL PROFILES

SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

VERIFY SCALE	
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DATE	MARCH 2010
PROJ	362936
DWG	05-C-002
SHEET	4 OF 45



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SURVEY CONTROL POINTS				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
500	371401.6217	3295186.4859	3753.77	SET 5/8" IR CTRL
503	371480.3746	3292090.7205	3765.33	SET 5/8" IR CTRL
505	371386.4376	3294648.6530	3755.29	SET 5/8" IR CTRL
510	371593.7876	3294132.0642	3753.29	SET 5/8" IR CTRL
515	371749.2226	3293857.7210	3749.44	SET 5/8" IR CTRL
520	371698.6072	3293692.8423	3748.79	SET PK NAIL
525	371686.9446	3293389.7834	3754.91	SET PK NAIL
540	371502.2163	3297639.3842	3757.55	SET 5/8" IR CTRL
B011	372331.2816	3291310.1971	3784.80	FD ODOT ALUM CAP
CH15	372042.1939	3291221.1582	3783.76	SET PK/WSHR
CH20	371628.0746	3291631.4059	3763.86	SET 5/8" IR CTRL
CH25	371516.2421	3292493.2530	3761.33	SET PK/WSHR
CH70	371495.6500	3297252.8693	3744.43	SET PK/WSHR

MURPHY ROAD PROPOSED MANHOLES		
MANHOLE #	COORDINATES	
	NORTHING	EASTING
19	371591.24	3292877.74
19A	371646.29	3292881.94
20	371535.35	3292521.57
20A	371505.80	3292526.83
21	371507.88	3292316.03
22	371506.40	3292144.06
22A	371546.76	3292158.03
22B	371482.96	3292135.75

- NOTES:
- HORIZONTAL DATUM: LOCAL DATUM PLANE BASED ON OREGON STATE PLANE, SOUTH ZONE, NAD 1983/91, INTERNATIONAL FEET, USING A COMBINED SCALE FACTOR OF 0.99982848349.
 - VERTICAL DATUM: NGVD 1929

PLAN
SCALE: 1"=80'



FOR SIGNATURES AND SEALS REFER TO ORIGINAL DRAWINGS, DATED DEC 2009

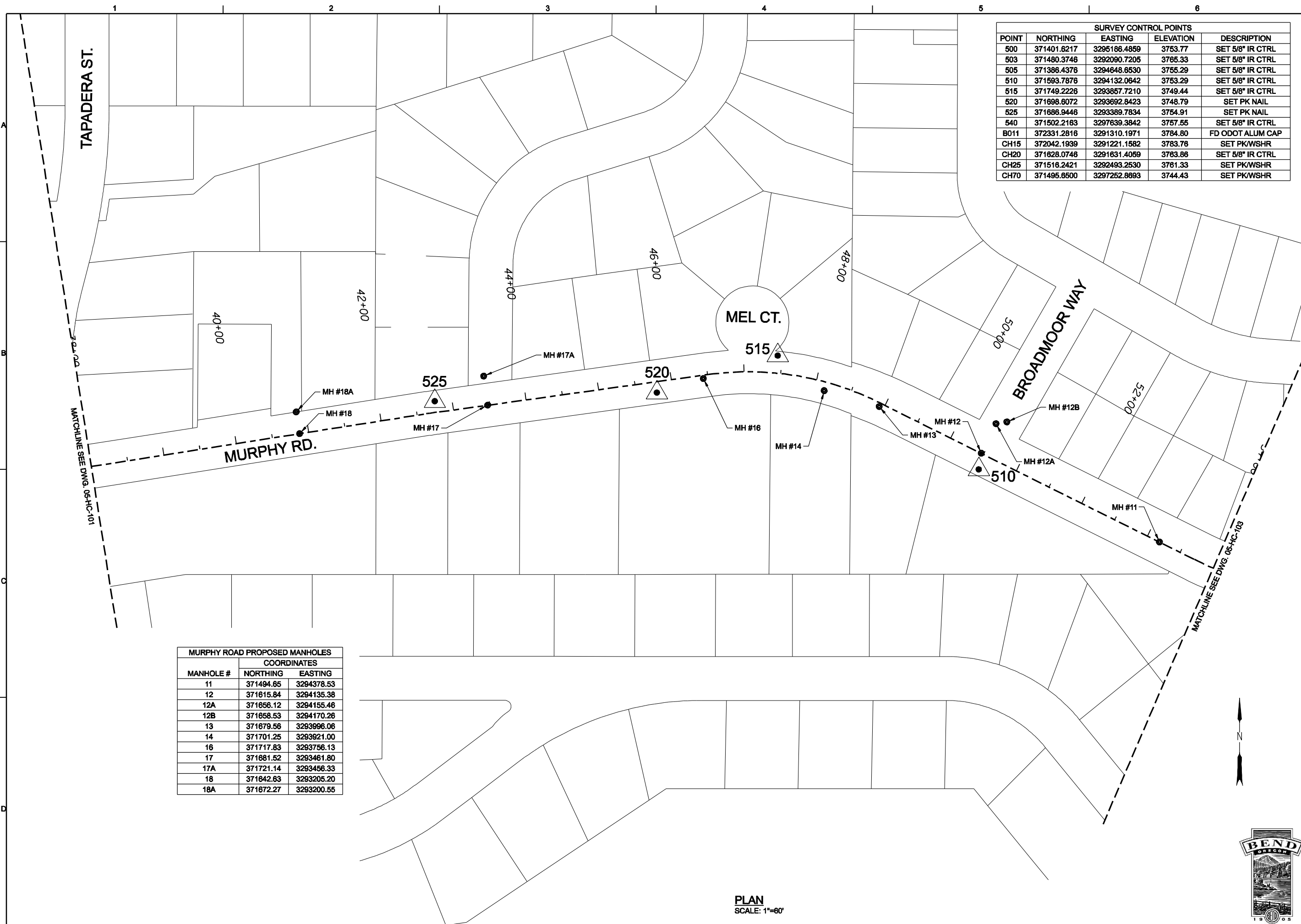
NO.	DATE	DR	CHK	REVISION	BY	APVD

SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

CH2MHILL
CIVIL
HORIZONTAL CONTROL

VERIFY SCALE	DATE	MARCH 2010
BAR IS ONE INCH ON ORIGINAL DRAWING.	PROJ	362936
	DWG	05-HC-101
	SHEET	5 OF 45

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SURVEY CONTROL POINTS				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
500	371401.6217	3295186.4889	3753.77	SET 5/8" IR CTRL
503	371480.3746	3292090.7205	3765.33	SET 5/8" IR CTRL
505	371386.4376	3294648.6530	3755.29	SET 5/8" IR CTRL
510	371593.7876	3294132.0642	3753.29	SET 5/8" IR CTRL
515	371749.2226	3293857.7210	3749.44	SET 5/8" IR CTRL
520	371698.6072	3293692.8423	3748.79	SET PK NAIL
525	371686.9446	3293389.7834	3754.91	SET PK NAIL
540	371502.2183	3297839.3842	3757.55	SET 5/8" IR CTRL
B011	372331.2816	3291310.1971	3784.80	FD ODOT ALUM CAP
CH15	372042.1939	3291221.1582	3783.76	SET PK/WSHR
CH20	371628.0746	3291631.4059	3763.86	SET 5/8" IR CTRL
CH25	371516.2421	3292493.2530	3761.33	SET PK/WSHR
CH70	371495.6500	3297252.8893	3744.43	SET PK/WSHR

MURPHY ROAD PROPOSED MANHOLES COORDINATES		
MANHOLE #	NORTHING	EASTING
11	371494.65	3294378.53
12	371615.84	3294135.38
12A	371656.12	3294155.46
12B	371658.53	3294170.26
13	371679.56	3293996.06
14	371701.25	3293921.00
16	371717.83	3293756.13
17	371681.52	3293461.80
17A	371721.14	3293456.33
18	371642.63	3293205.20
18A	371672.27	3293200.55

FOR SIGNATURES AND SEALS REFER TO ORIGINAL DRAWINGS, DATED DEC 2009

NO.	DATE	DR	CHK	APVD	APPROVED-BY
		J. STALLARD	R. LUKE	J. McMADE	

SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

CH2MHILL
CIVIL
HORIZONTAL CONTROL

VERIFY SCALE	DATE	MARCH 2010
BAR IS ONE INCH ON ORIGINAL DRAWING. 1" = 60'	PROJ	362936
	DWG	05-HC-102
	SHEET	6 OF 45

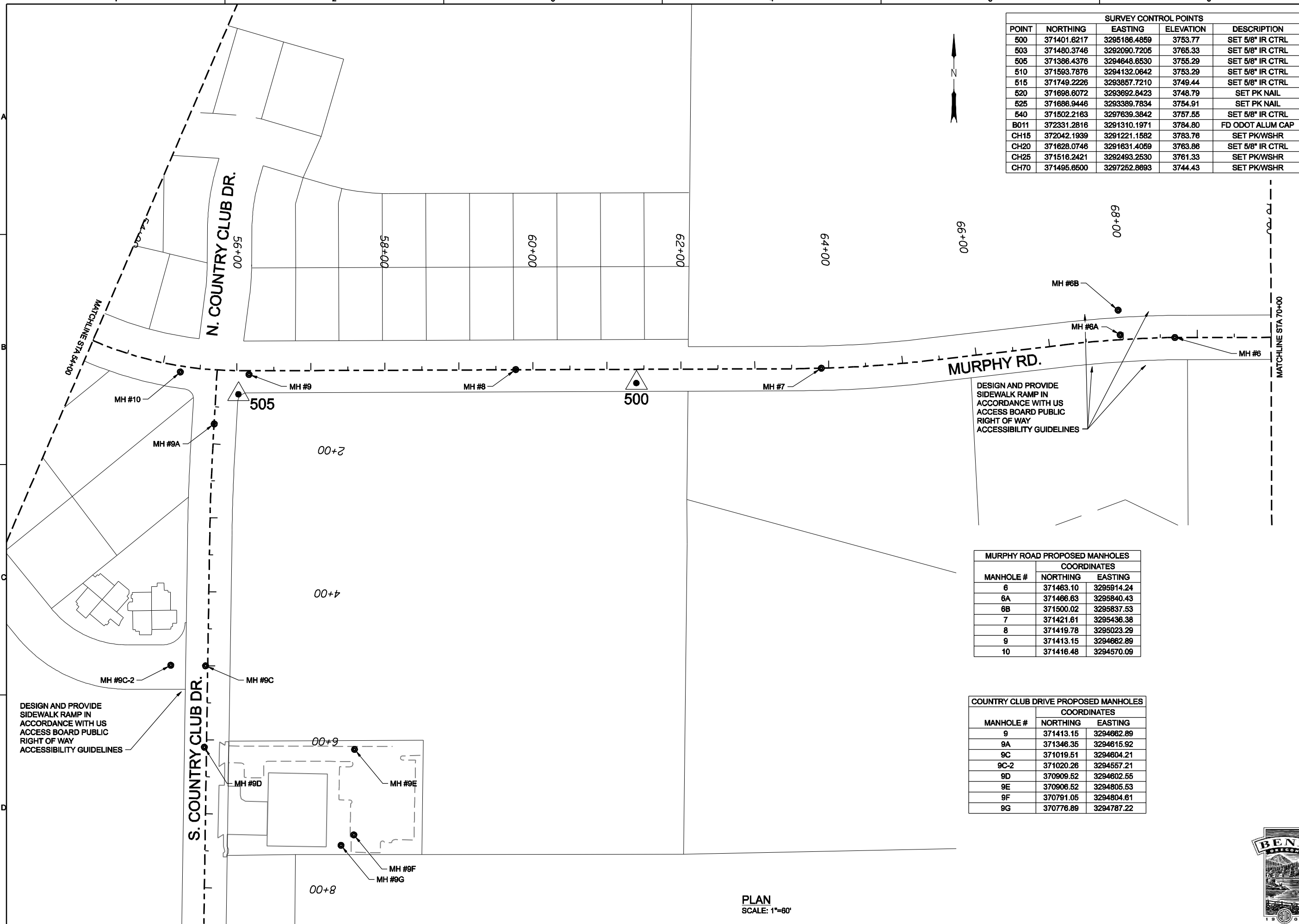
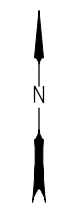
PLAN
SCALE: 1"=60'



PRELIMINARY
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1 2 3 4 5 6

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CH25	371516.2421	3292493.2530	3761.33	SET PK/WSHR
CH70	371495.6500	3297252.8693	3744.43	SET PK/WSHR



DESIGN AND PROVIDE SIDEWALK RAMP IN ACCORDANCE WITH US ACCESS BOARD PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES

DESIGN AND PROVIDE SIDEWALK RAMP IN ACCORDANCE WITH US ACCESS BOARD PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES

MURPHY ROAD PROPOSED MANHOLES COORDINATES		
MANHOLE #	NORTHING	EASTING
6	371463.10	3295914.24
6A	371466.63	3295840.43
6B	371500.02	3295837.53
7	371421.61	3295436.38
8	371419.78	3295023.29
9	371413.15	3294662.89
10	371416.48	3294570.09

COUNTRY CLUB DRIVE PROPOSED MANHOLES COORDINATES		
MANHOLE #	NORTHING	EASTING
9	371413.15	3294662.89
9A	371346.35	3294615.92
9C	371019.51	3294604.21
9C-2	371020.26	3294557.21
9D	370909.52	3294602.55
9E	370906.52	3294805.53
9F	370791.05	3294804.61
9G	370776.89	3294787.22

FOR SIGNATURES AND SEALS REFER TO ORIGINAL DRAWINGS, DATED DEC 2009

NO.	DATE	DR	CHK	APVD	APPROVED-BY
		J. STALLARD	R. LUKE	J. McMADE	

SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

CH2MHILL
CIVIL
HORIZONTAL CONTROL

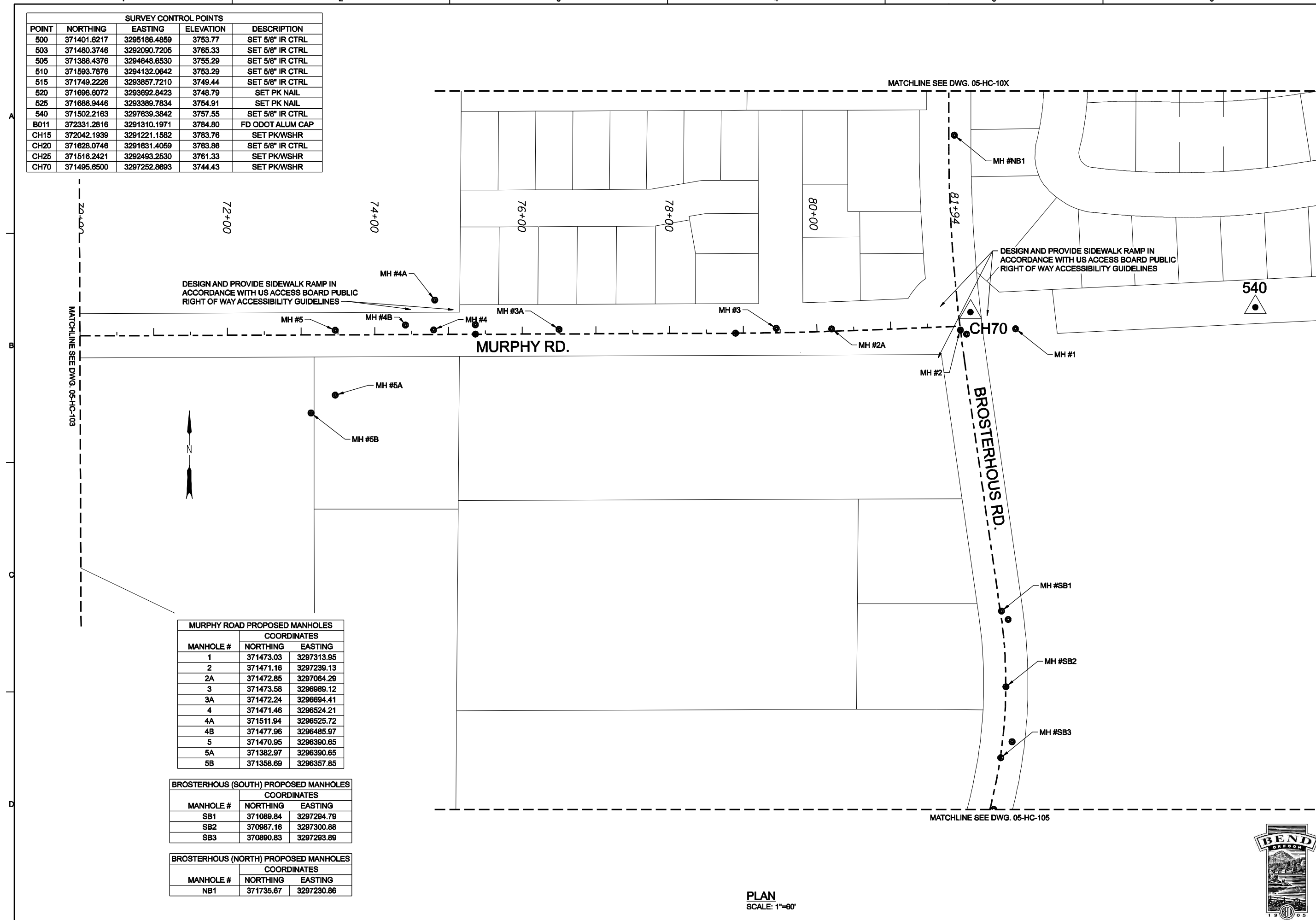


VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	MARCH 2010
PROJ	362936
DWG	05-HC-103
SHEET	7 OF 45

PLAN
SCALE: 1"=80'

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SURVEY CONTROL POINTS				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
500	371401.6217	3295186.4859	3753.77	SET 5/8" IR CTRL
503	371480.3746	3292090.7205	3765.33	SET 5/8" IR CTRL
505	371386.4376	3294648.6530	3755.29	SET 5/8" IR CTRL
510	371593.7876	3294132.0642	3753.29	SET 5/8" IR CTRL
515	371749.2226	3293857.7210	3749.44	SET 5/8" IR CTRL
520	371698.6072	3293692.8423	3748.79	SET PK NAIL
525	371686.9446	3293389.7834	3754.91	SET PK NAIL
540	371502.2163	3297839.3842	3757.55	SET 5/8" IR CTRL
B011	372331.2816	3291310.1971	3784.80	FD ODOT ALUM CAP
CH15	372042.1939	3291221.1582	3783.76	SET PK/WSHR
CH20	371628.0746	3291831.4059	3783.86	SET 5/8" IR CTRL
CH25	371516.2421	3292493.2530	3761.33	SET PK/WSHR
CH70	371495.6500	3297252.8693	3744.43	SET PK/WSHR



MURPHY ROAD PROPOSED MANHOLES		
MANHOLE #	COORDINATES	
	NORTHING	EASTING
1	371473.03	3297313.95
2	371471.16	3297239.13
2A	371472.85	3297064.29
3	371473.58	3296989.12
3A	371472.24	3296694.41
4	371471.46	3296524.21
4A	371511.94	3296525.72
4B	371477.96	3296485.97
5	371470.95	3296390.65
5A	371382.97	3296390.65
5B	371358.69	3296357.85

BROSTERHOUS (SOUTH) PROPOSED MANHOLES		
MANHOLE #	COORDINATES	
	NORTHING	EASTING
SB1	371089.84	3297294.79
SB2	370987.16	3297300.88
SB3	370890.83	3297293.89

BROSTERHOUS (NORTH) PROPOSED MANHOLES		
MANHOLE #	COORDINATES	
	NORTHING	EASTING
NB1	371735.67	3297230.86

FOR SIGNATURES AND SEALS REFER TO ORIGINAL DRAWINGS, DATED DEC 2009

NO.	DATE	DR	APVD	APPROVED-BY
		J. STALLARD		J. McMADE
		R. LUKE		

SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

CH2MHILL
CIVIL
HORIZONTAL CONTROL

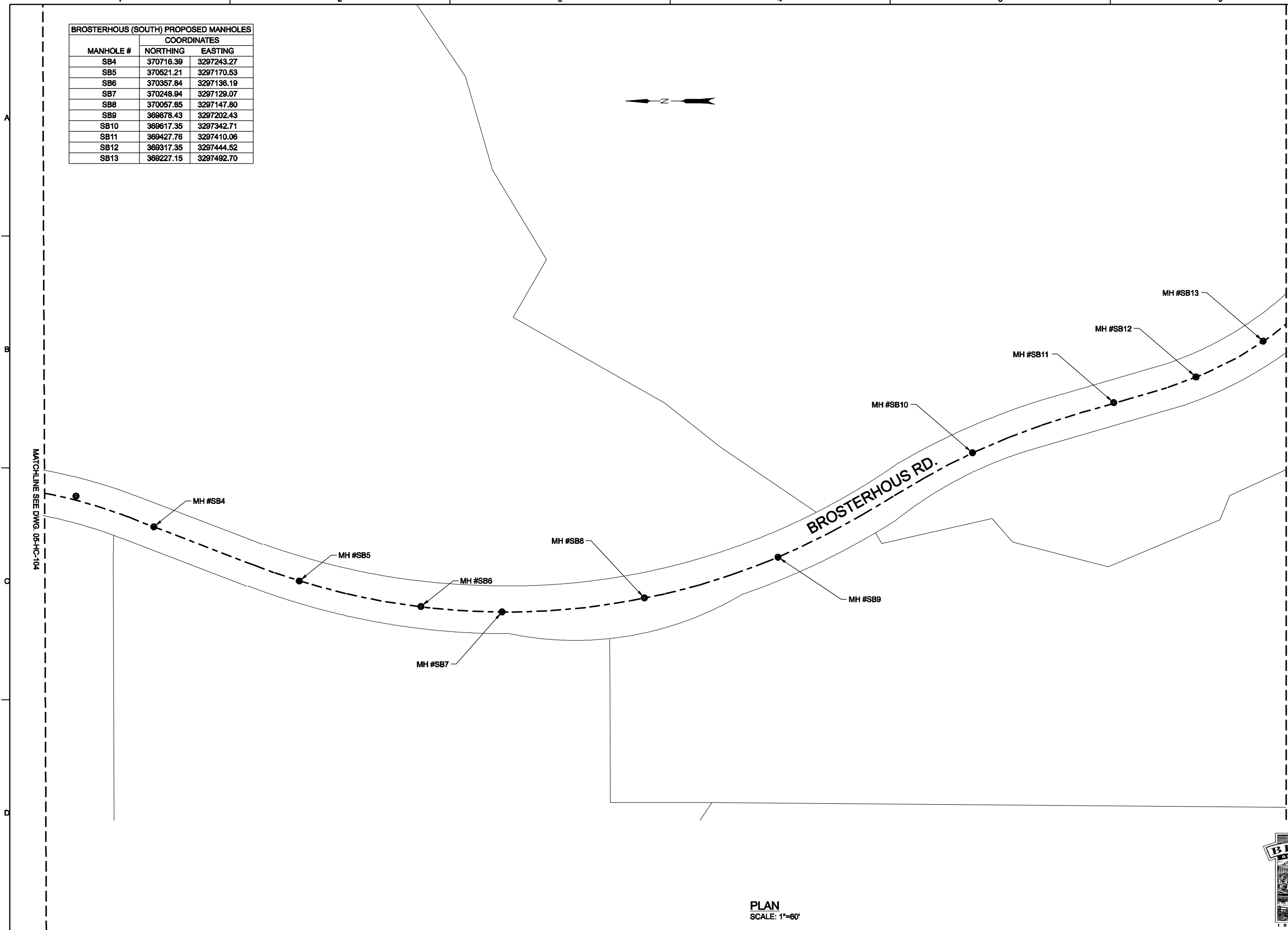
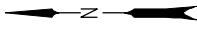
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BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	MARCH 2010
PROJ	362936
DWG	05-HC-104
SHEET	8 OF 45

PLAN
SCALE: 1"=60'



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BROSTERHOUS (SOUTH) PROPOSED MANHOLES		
MANHOLE #	COORDINATES	
	NORTHING	EASTING
SB4	370716.39	3297243.27
SB5	370521.21	3297170.53
SB6	370357.84	3297136.19
SB7	370248.94	3297129.07
SB8	370057.85	3297147.80
SB9	369878.43	3297202.43
SB10	369617.35	3297342.71
SB11	369427.76	3297410.06
SB12	369317.35	3297444.52
SB13	369227.15	3297492.70



PLAN
SCALE: 1"=60'



FOR
SIGNATURES
AND SEALS REFER
TO ORIGINAL
DRAWINGS, DATED
DEC 2009

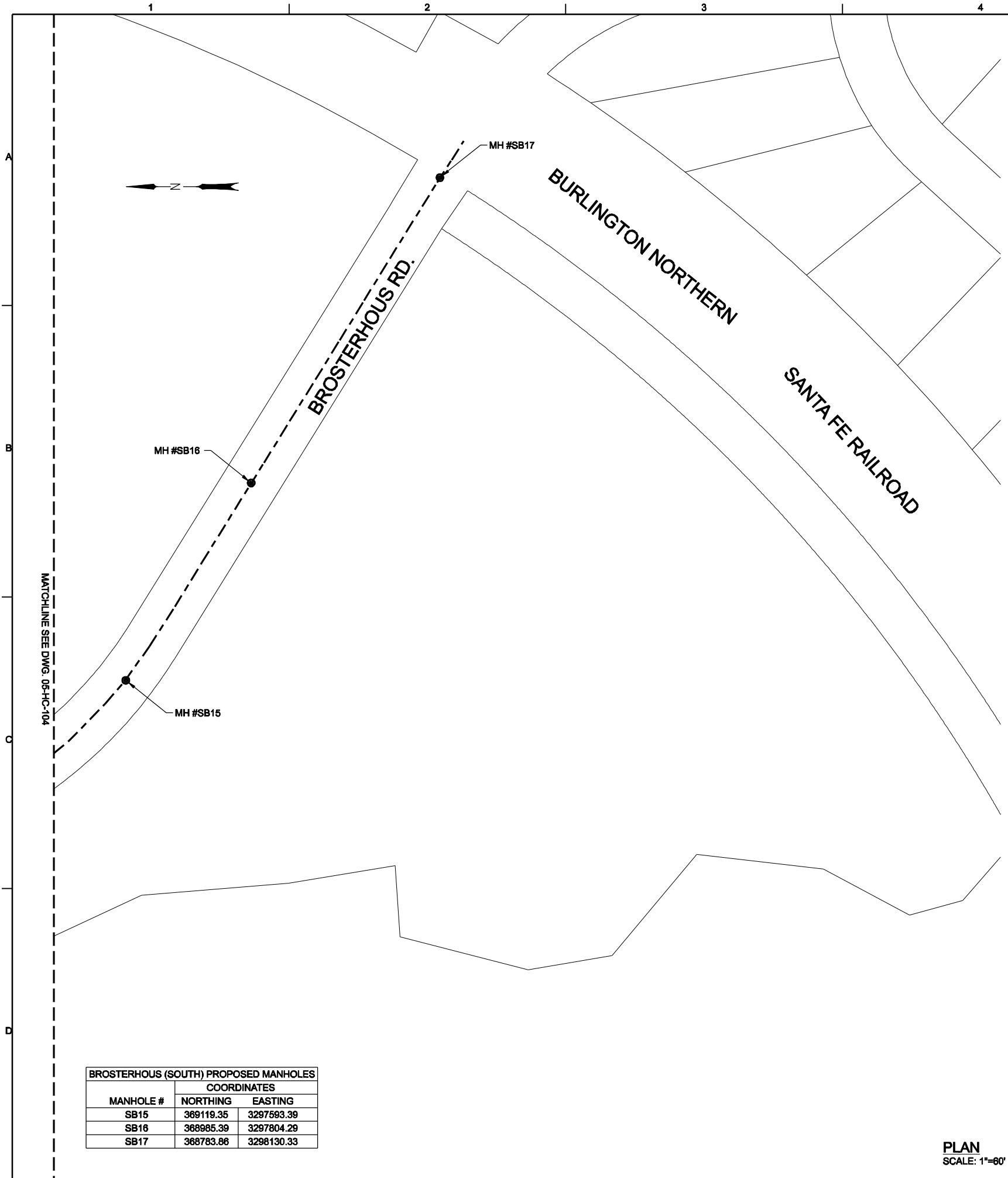
NO.	DATE	DR	CHK	APVD	APPROVED-BY
		J. STALLARD	R. LUKE	J. McWADE	

SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

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BROSTERHAUS (SOUTH) PROPOSED MANHOLES		
MANHOLE #	COORDINATES	
	NORTHING	EASTING
SB15	369119.35	3297593.39
SB16	368985.39	3297804.29
SB17	368783.86	3298130.33

PLAN
SCALE: 1"=60'



FOR SIGNATURES AND SEALS REFER TO ORIGINAL DRAWINGS, DATED DEC 2009

NO.	DATE	DR	REVISION	CHK	APVD	BY	APVD

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SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

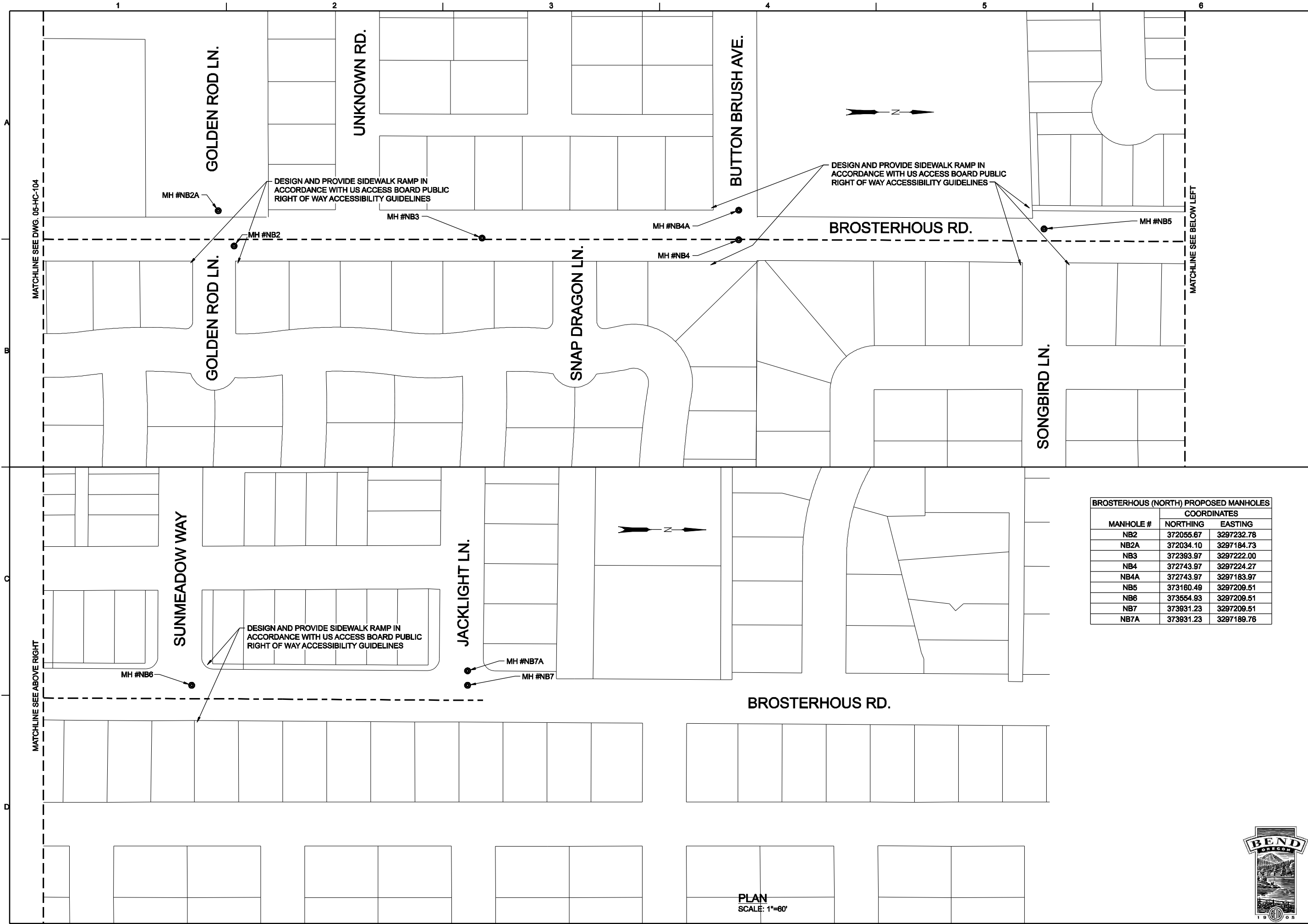
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DATE MARCH 2010
PROJ 362936
DWG 05-HC-106
SHEET 10 OF 45

APPROVED-BY: J. McMADE
BY: J. McMADE
APVD: J. McMADE

REVISION: R. LUKE
CHK: R. LUKE
DR: J. STALLARD

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NO.	DATE	DR	CHK	APVD	APPROVED-BY
		J. STALLARD	R. LUKE	J. McMADE	J. McMADE

SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

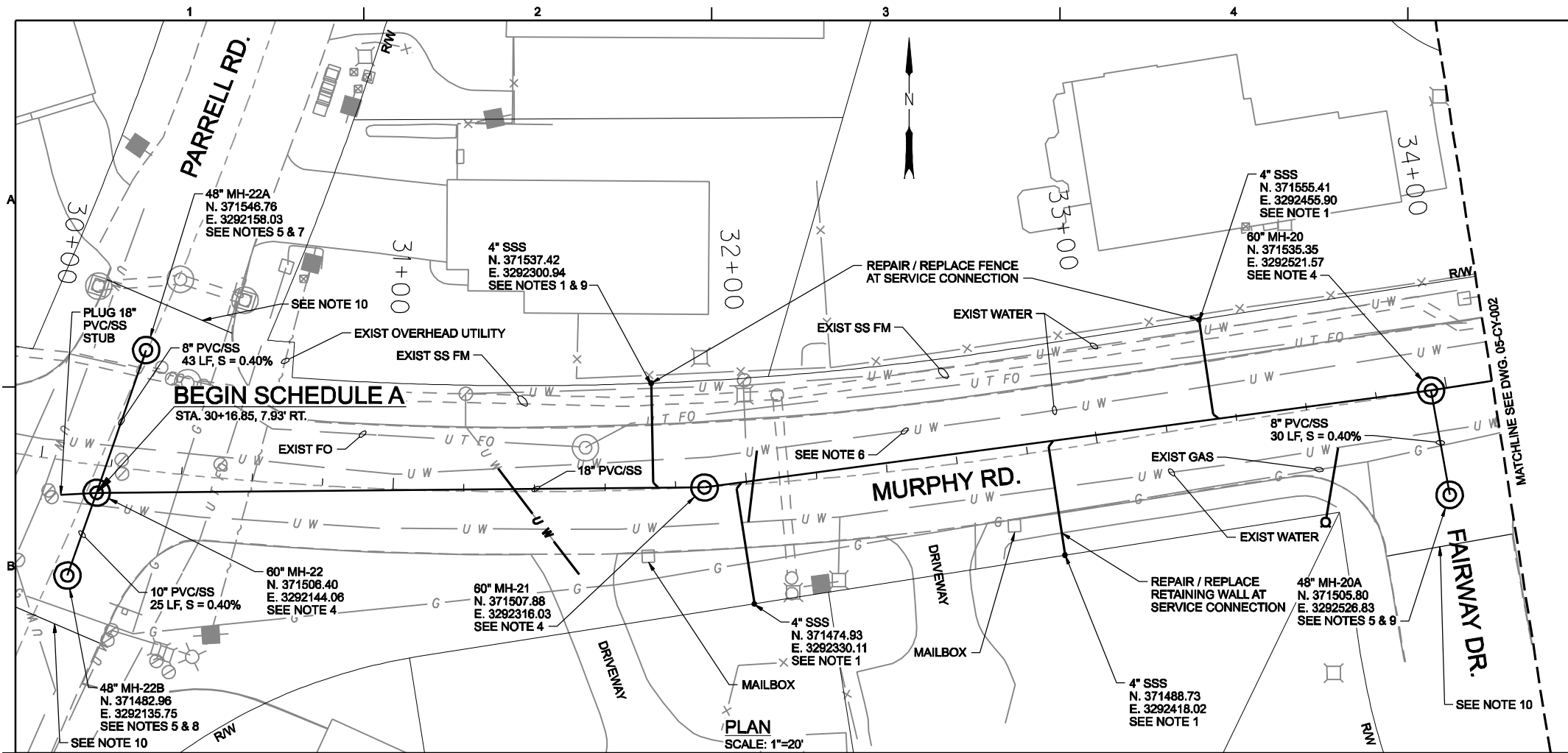
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HORIZONTAL CONTROL

BROSTERHAUS (NORTH) PROPOSED MANHOLES COORDINATES		
MANHOLE #	NORTHING	EASTING
NB2	372055.67	3297232.78
NB2A	372034.10	3297184.73
NB3	372393.97	3297222.00
NB4	372743.97	3297224.27
NB4A	372743.97	3297183.97
NB5	373160.49	3297209.51
NB6	373554.93	3297209.51
NB7	373931.23	3297209.51
NB7A	373931.23	3297189.76

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
DATE MARCH 2010
PROJ 362936
DWG 05-HC-107
SHEET 11 OF 45

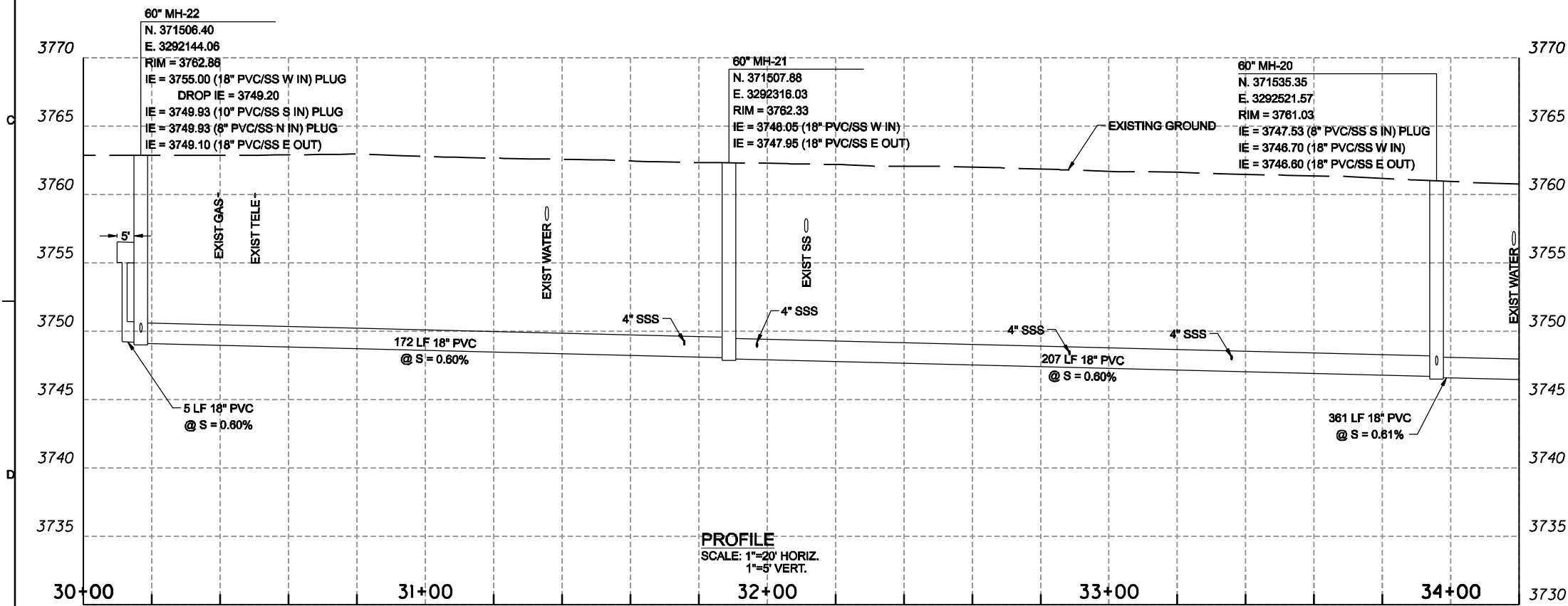
PLAN
SCALE: 1"=60'

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NOTES:

- 4" SANITARY SEWER SERVICE PER CITY OF BEND DETAIL S-15. PROVIDE SERVICE CONNECTION MARKER AS DETAILED IN CITY OF BEND STANDARD SPECIFICATION 00400.
- ALL EXISTING SANITARY SEWER LINES ARE PRESSURIZED.
- LOCATION OF SERVICE LATERAL SHALL BE FIELD ADJUSTED TO ALIGN WITH EXISTING HOME OWNER SERVICE LATERAL LOCATION.
- HDPE MANHOLE PER CITY OF BEND DETAIL S-14.
- PRECAST CONCRETE MANHOLE PER DETAIL S-3R WITH EPOXY LINER PER CITY OF BEND STANDARD SPECIFICATION 00400.
- ROATS WATER SYSTEM TO ABANDON EXISTING 8" WATER MAIN. IF ABANDONED WATER MAIN IS DISTURBED OR DISPLACED DURING CONSTRUCTION, CONTRACTOR SHALL REMOVE AND DISPOSE OF PROPERLY PRIOR TO BACKFILLING TRENCH.
- MH-22A
RIM = 3761.70
IE = 3750.05 (8" PVC/SS S OUT)
- CONTRACTOR TO RELOCATE EXISTING DRYWELL IN CONFLICT WITH SE INTERCEPTOR TO THE NORTH OR SOUTH OF THE SANITARY SEWER FAR ENOUGH TO ALLOW THE RECONSTRUCTION OF THE DRYWELL TO MATCH DEPTH AND DIAMETER WITHIN THE MURPHY ROAD R-O-W PER CITY OF BEND DETAIL R-12. CONTRACTOR SHALL FIELD VERIFY LOCATION AND APPROVAL BY ENGINEER IS REQUIRED PRIOR TO STARTING RELOCATION.
- MH-20A
RIM = 3761.62
IE = 3747.65 (8" PVC/SS S OUT)
- PAVING PAY LIMITS 10' BEYOND PROPOSED MANHOLE.



FOR SIGNATURES AND SEALS REFER TO ORIGINAL DRAWINGS, DATED DEC 2009

NO.	DATE	BY	APPROVED BY
1	1/19/2010	J. STALLARD	J. McMADE
REVISION		CHK	APVD
ADDENDUM #1		DR	APVD

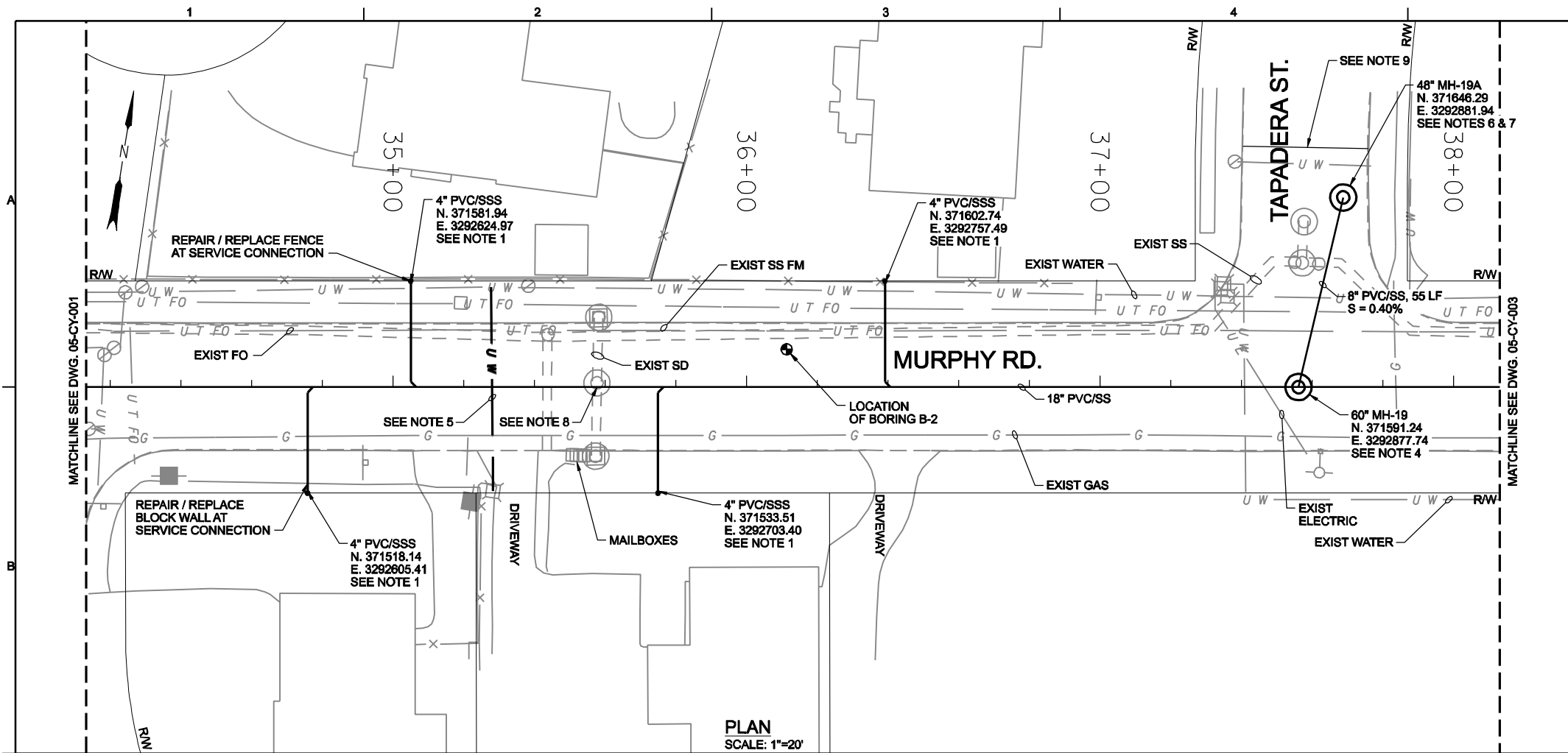
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SANITARY SEWER
PLAN AND PROFILE

SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON



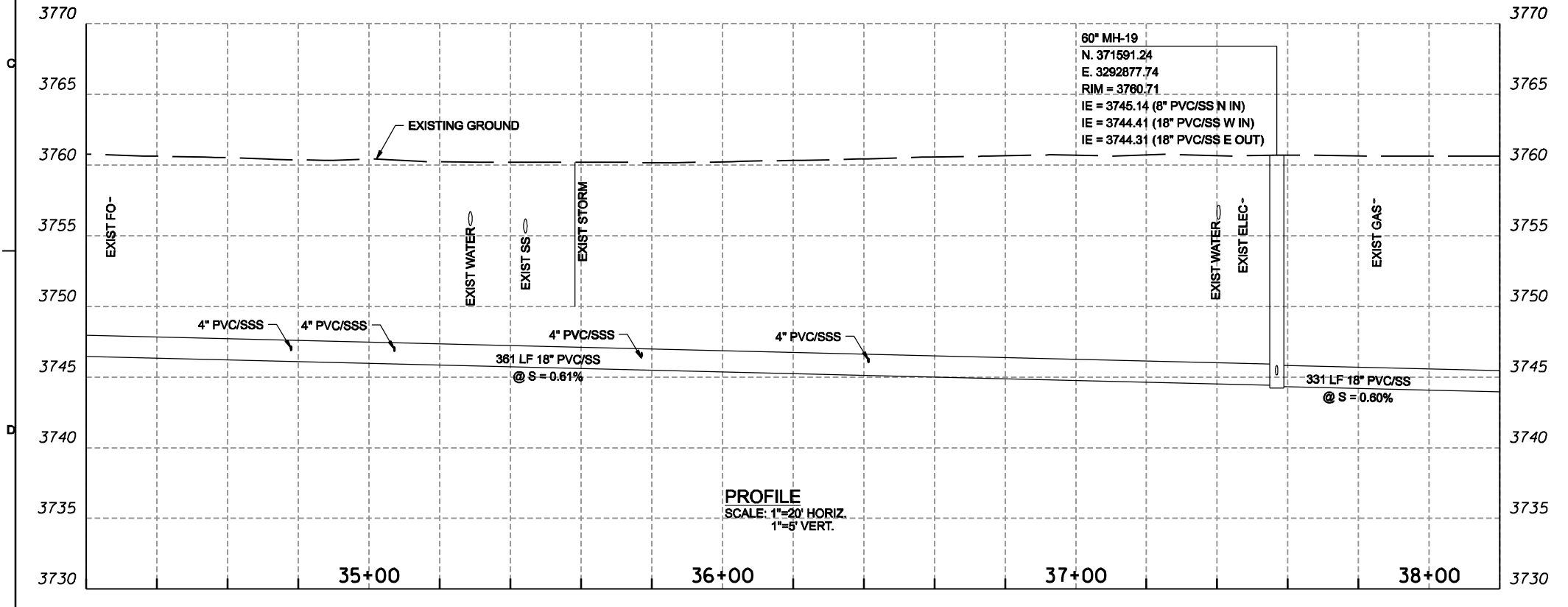
VERIFY SCALE
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DATE	MARCH 2010
PROJ	362936
DWG	05-CY-001
SHEET	12 OF 45



NOTES:

- 4" SANITARY SEWER SERVICE PER CITY OF BEND DETAIL S-15. PROVIDE SERVICE CONNECTION MARKER AS DETAILED IN CITY OF BEND STANDARD SPECIFICATION 00400.
- ALL EXISTING SANITARY SEWER LINES ARE PRESSURIZED.
- LOCATION OF SERVICE LATERAL SHALL BE FIELD ADJUSTED TO ALIGN WITH HOME OWNER SERVICE LATERAL LOCATION.
- HDPE MANHOLE PER CITY OF BEND DETAIL S-14.
- CONTRACTOR TO COORDINATE WITH ROATS WATER FOR UTILIZATION OF TRAFFIC CONTROL IN ORDER FOR ROATS TO UPGRADE EXISTING SERVICE LATERAL MATERIAL. ROATS TO BE RESPONSIBLE FOR INSTALLATION WITH CONTRACTOR PROVIDING TRAFFIC CONTROL. REFER TO SECTION 150.50 PROJECT SPECIALS FOR COORDINATION REQUIREMENTS.
- PRECAST CONCRETE MANHOLE PER DETAIL S-3R WITH EPOXY LINER PER CITY OF BEND STANDARD SPECIFICATION 00400.
- MANHOLE - 19A
RIM = 3759.45
IE = 3745.36 (8" PVC/SS S OUT)
- DRYWELL TO BE RECONSTRUCTED 5' NORTH OF SANITARY PER CITY OF BEND STANDARD DETAIL R-12.
- PAVING PAY LIMITS 10' BEYOND PROPOSED MANHOLE.



FOR SIGNATURES AND SEALS REFER TO ORIGINAL DRAWINGS, DATED DEC 2009

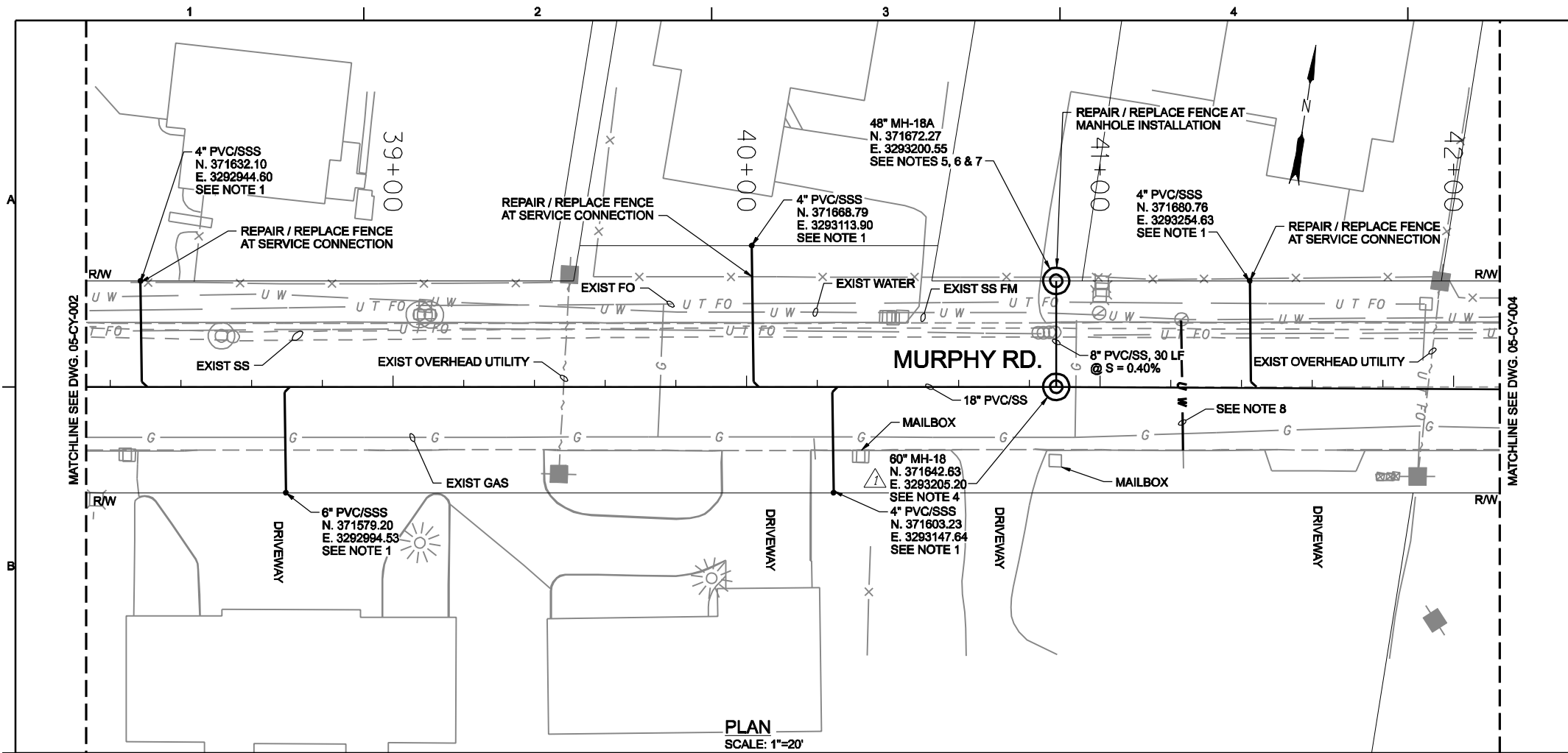
NO.	DATE	DR	CHK	APVD	APPROVED-BY
		J. STALLARD	R. LUKE	J. McMADE	

CH2MHILL
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 SCHEDULE A
 SANITARY SEWER
 PLAN AND PROFILE

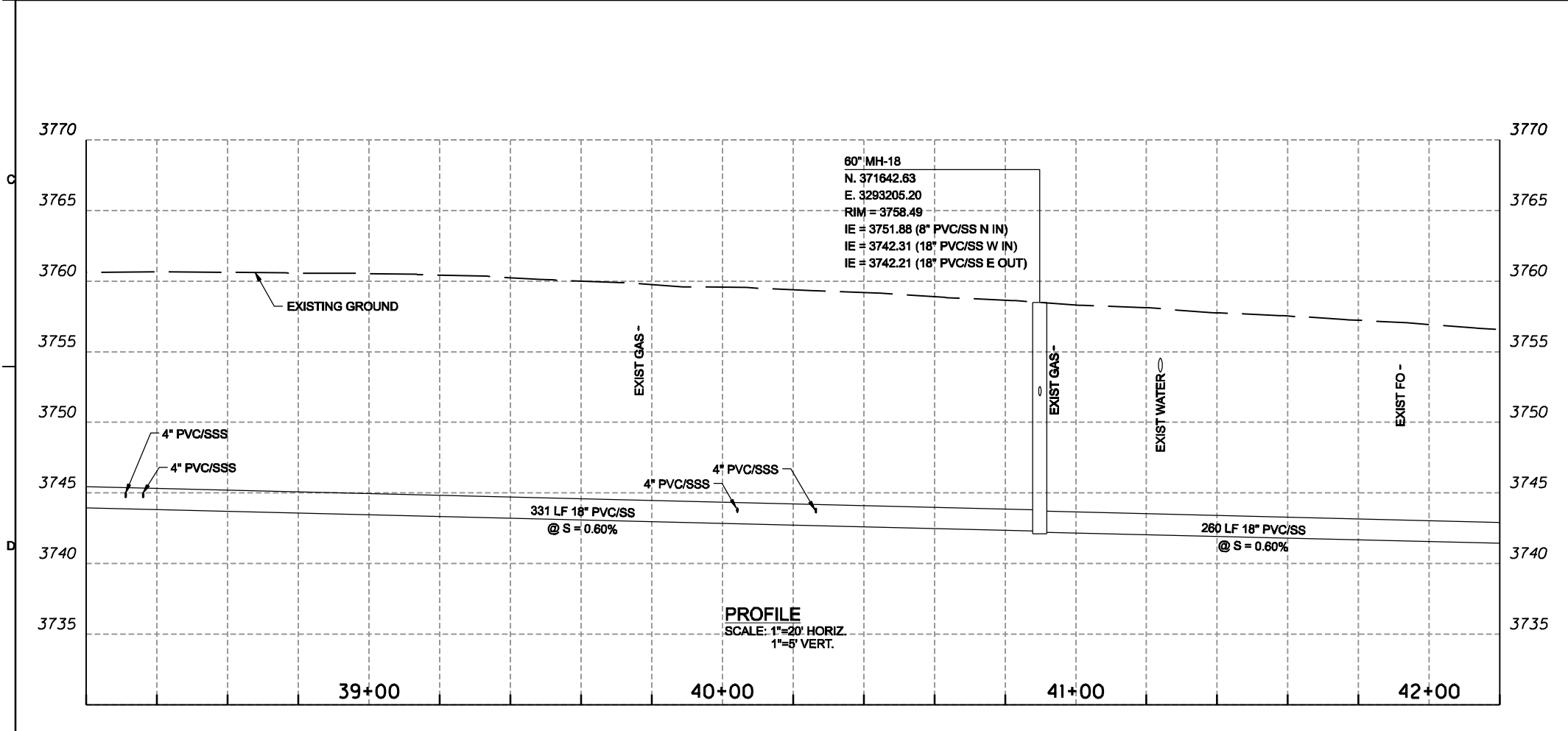
SOUTHEAST INTERCEPTOR
 MURPHY ROAD SEGMENT
 CITY OF BEND, OREGON

VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	MARCH 2010
PROJ	362936
DWG	05-CY-002
SHEET	13 OF 45





- NOTES:**
- 4" SANITARY SEWER SERVICE PER CITY OF BEND DETAIL S-15. PROVIDE SERVICE CONNECTION MARKER AS DETAILED IN CITY OF BEND STANDARD SPECIFICATION 00400.
 - ALL EXISTING SANITARY SEWER LINES ARE PRESSURIZED.
 - LOCATION OF SERVICE LATERAL SHALL BE FIELD ADJUSTED TO ALIGN WITH HOME OWNER SERVICE LATERAL LOCATION.
 - HDPE MANHOLE PER CITY OF BEND DETAIL S-14.
 - PRECAST CONCRETE MANHOLE PER DETAIL S-3R WITH EPOXY LINER PER CITY OF BEND STANDARD SPECIFICATION 00400.
 - FIELD LOCATE 4 EXISTING PRIVATE PRESSURE SEWER LATERALS AND CONNECT DOWNSTREAM OF MH-18A PER CITY OF BEND STANDARD SPECIFICATION 00400.
 - MANHOLE - 18A
RIM = 3757.25
IE - 3752.00 (8" PVC/SS S OUT)
 - CONTRACTOR TO COORDINATE WITH ROATS WATER FOR UTILIZATION OF TRAFFIC CONTROL IN ORDER FOR ROATS TO UPGRADE EXISTING SERVICE LATERAL MATERIAL. ROATS TO BE RESPONSIBLE FOR INSTALLATION WITH CONTRACTOR PROVIDING TRAFFIC CONTROL. REFER TO SECTION 150.50 PROJECT SPECIALS FOR COORDINATION REQUIREMENTS.
 - PROVIDE OUTSIDE DROP FOR 8-INCH PVC/SS INTO MH 18-A.



FOR SIGNATURES AND SEALS REFER TO ORIGINAL DRAWINGS, DATED DEC 2009

NO.	DATE	BY	APPROVED BY
1	1/22/2010	J. STALLARD	J. McMADE
DGN		DR	APVD
NO.		REVISION	CHK
1		ADDENDUM #2	BY
		ADDENDUM #2	APVD

SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

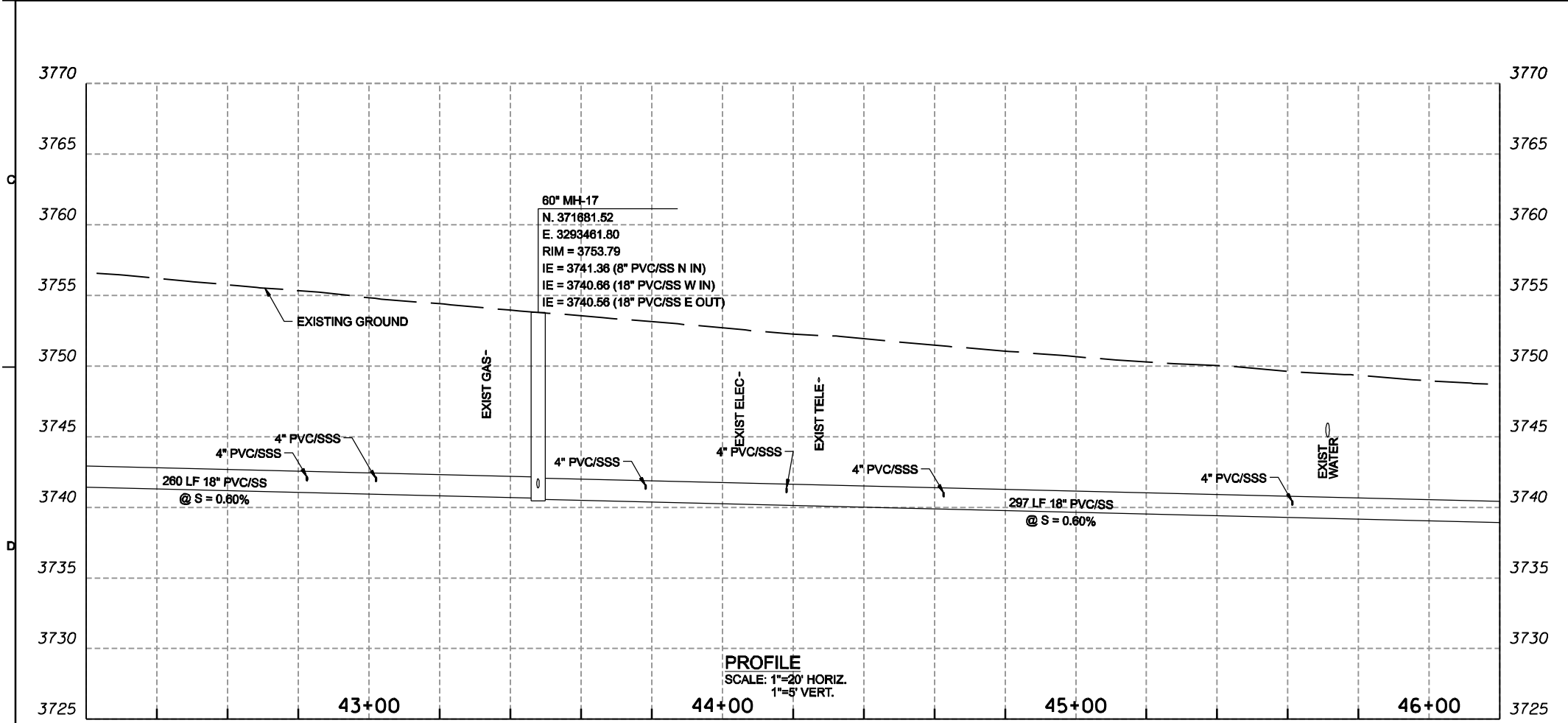
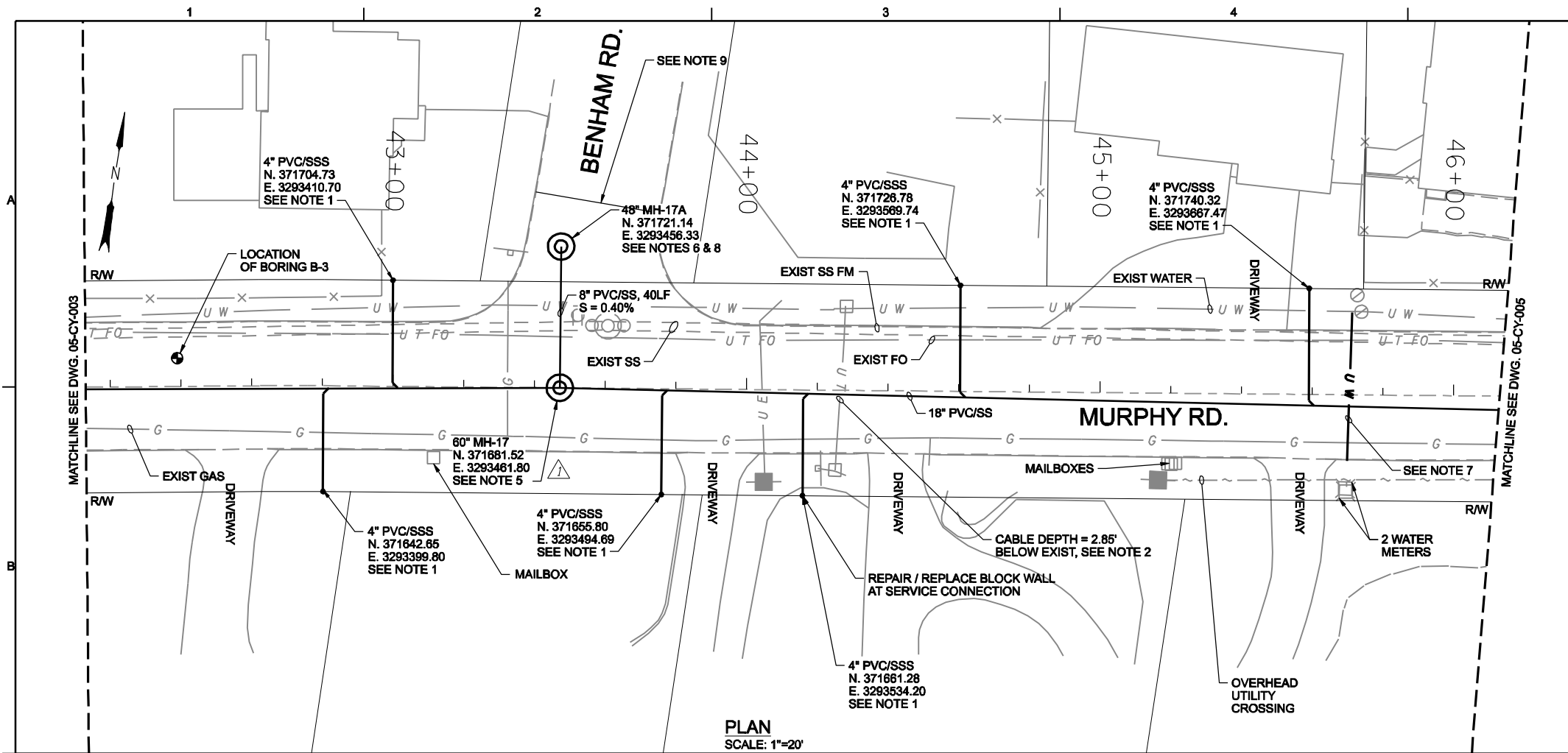
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SANITARY SEWER
PLAN AND PROFILE

VERIFY SCALE
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0 1'

DATE MARCH 2010
PROJ 362936
DWG 05-CY-003
SHEET 14 OF 45





NOTES:

- 4" SANITARY SEWER SERVICE PER CITY OF BEND DETAIL S-15. PROVIDE SERVICE CONNECTION MARKER AS DETAILED IN CITY OF BEND STANDARD SPECIFICATION 00400.
- UTILITY DEPTH INFORMATION FROM OTAK POTHOLING DATA REPORT OCTOBER 30, 2008.
- ALL EXISTING SANITARY SEWER LINES ARE PRESSURIZED.
- LOCATION OF SERVICE LATERAL SHALL BE FIELD ADJUSTED TO ALIGN WITH HOME OWNER SERVICE LATERAL LOCATION.
- HDPE MANHOLE PER CITY OF BEND DETAIL S-14.
- PRECAST CONCRETE MANHOLE PER DETAIL S-3R WITH EPOXY LINER PER CITY OF BEND STANDARD SPECIFICATION 00400.
- CONTRACTOR TO COORDINATE WITH ROATS WATER FOR UTILIZATION OF TRAFFIC CONTROL IN ORDER FOR ROATS TO UPGRADE EXISTING SERVICE LATERAL MATERIAL. ROATS TO BE RESPONSIBLE FOR INSTALLATION WITH CONTRACTOR PROVIDING TRAFFIC CONTROL. REFER TO SECTION 150.50 PROJECT SPECIALS FOR COORDINATION REQUIREMENTS.
- MANHOLE - 17A
RIM = 3753.31
IE = 3741.52 (8" PVC/SS S OUT)
- PAVING PAY LIMITS 10' BEYOND PROPOSED MANHOLE.

FOR
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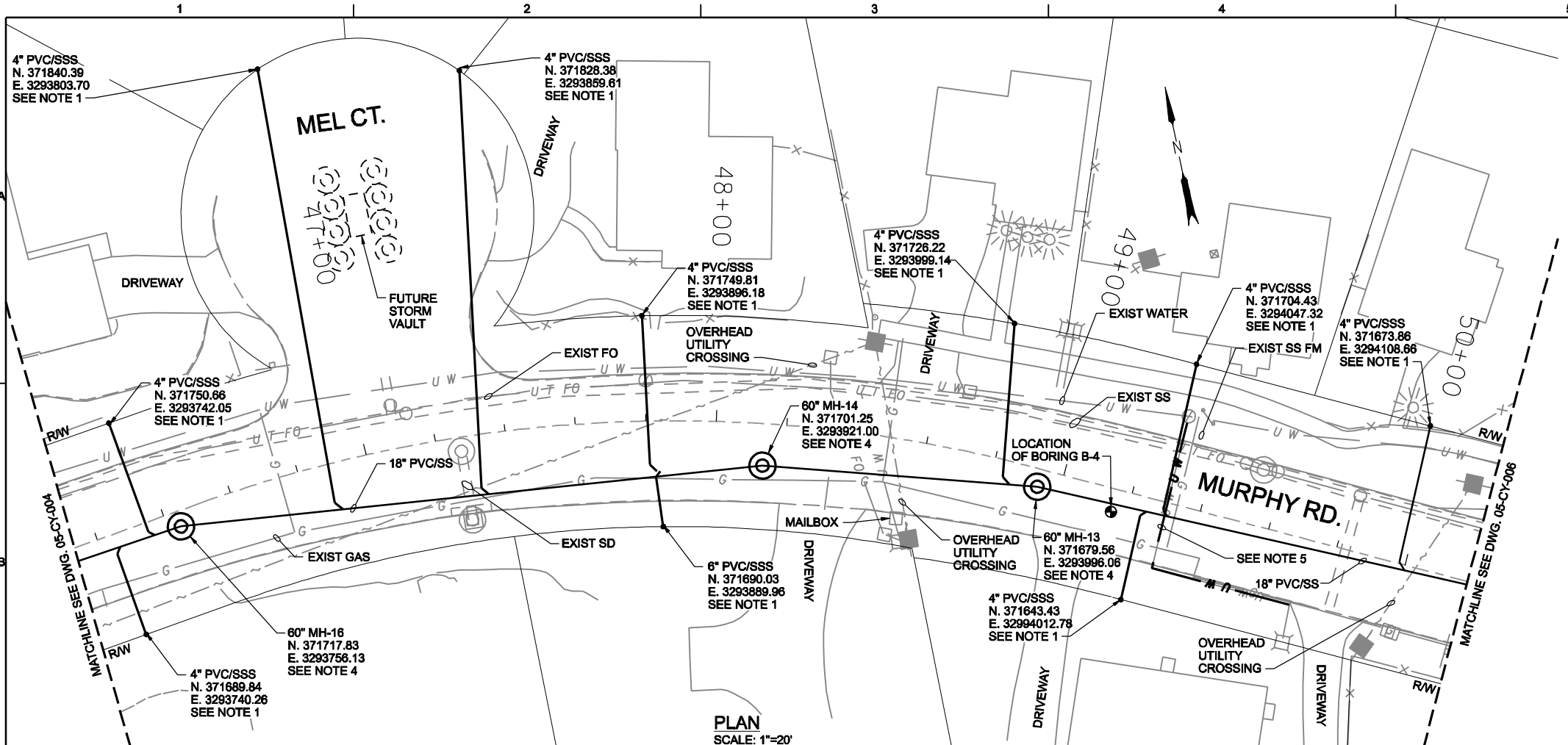
NO.	DATE	BY	APPROVED BY
1	1/22/2010	J. STALLARD	J. McMADE
REVISION		CHK	APVD
APPENDUM #2		ROL	JSS

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SCHEDULE A
SANITARY SEWER
PLAN AND PROFILE

SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

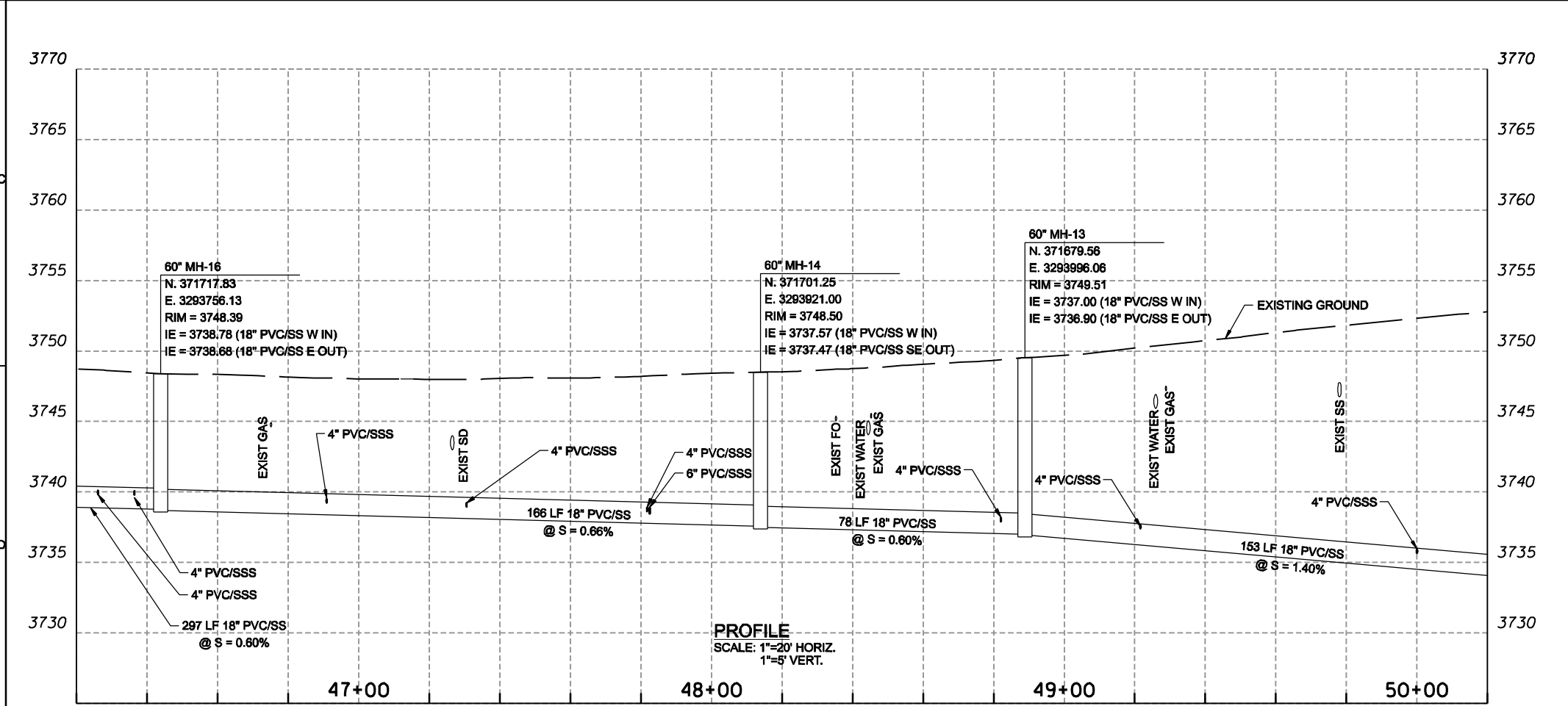
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DATE	MARCH 2010
PROJ	362936
DWG	05-CY-004
SHEET	15 OF 45





- NOTES:
- 4" OR 6" SANITARY SEWER SERVICE PER CITY OF BEND DETAIL S-15. PROVIDE SERVICE CONNECTION MARKER AS DETAILED IN CITY OF BEND STANDARD SPECIFICATION 00400.
 - ALL EXISTING SANITARY SEWER LINES ARE PRESSURIZED.
 - LOCATION OF SERVICE LATERAL SHALL BE FIELD ADJUSTED TO ALIGN WITH HOME OWNER SERVICE LATERAL LOCATION.
 - HDPE MANHOLE PER CITY OF BEND DETAIL S-14.
 - CONTRACTOR TO COORDINATE WITH ROATS WATER FOR UTILIZATION OF TRAFFIC CONTROL IN ORDER FOR ROATS TO UPGRADE EXISTING SERVICE LATERAL MATERIAL. ROATS TO BE RESPONSIBLE FOR INSTALLATION WITH CONTRACTOR PROVIDING TRAFFIC CONTROL. REFER TO SECTION 150.50 PROJECT SPECIALS FOR COORDINATION REQUIREMENTS.

PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ.
1"=5' VERT.

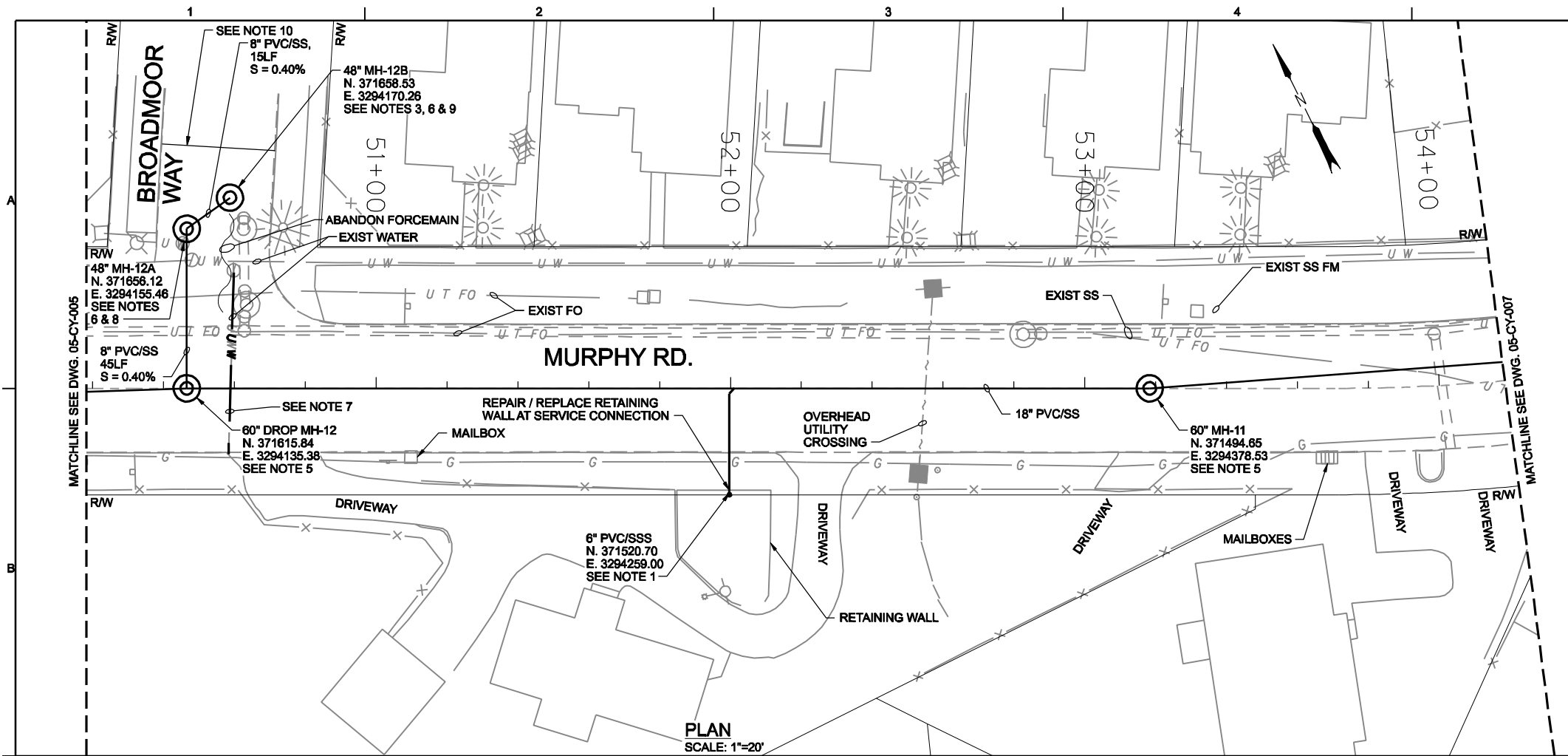


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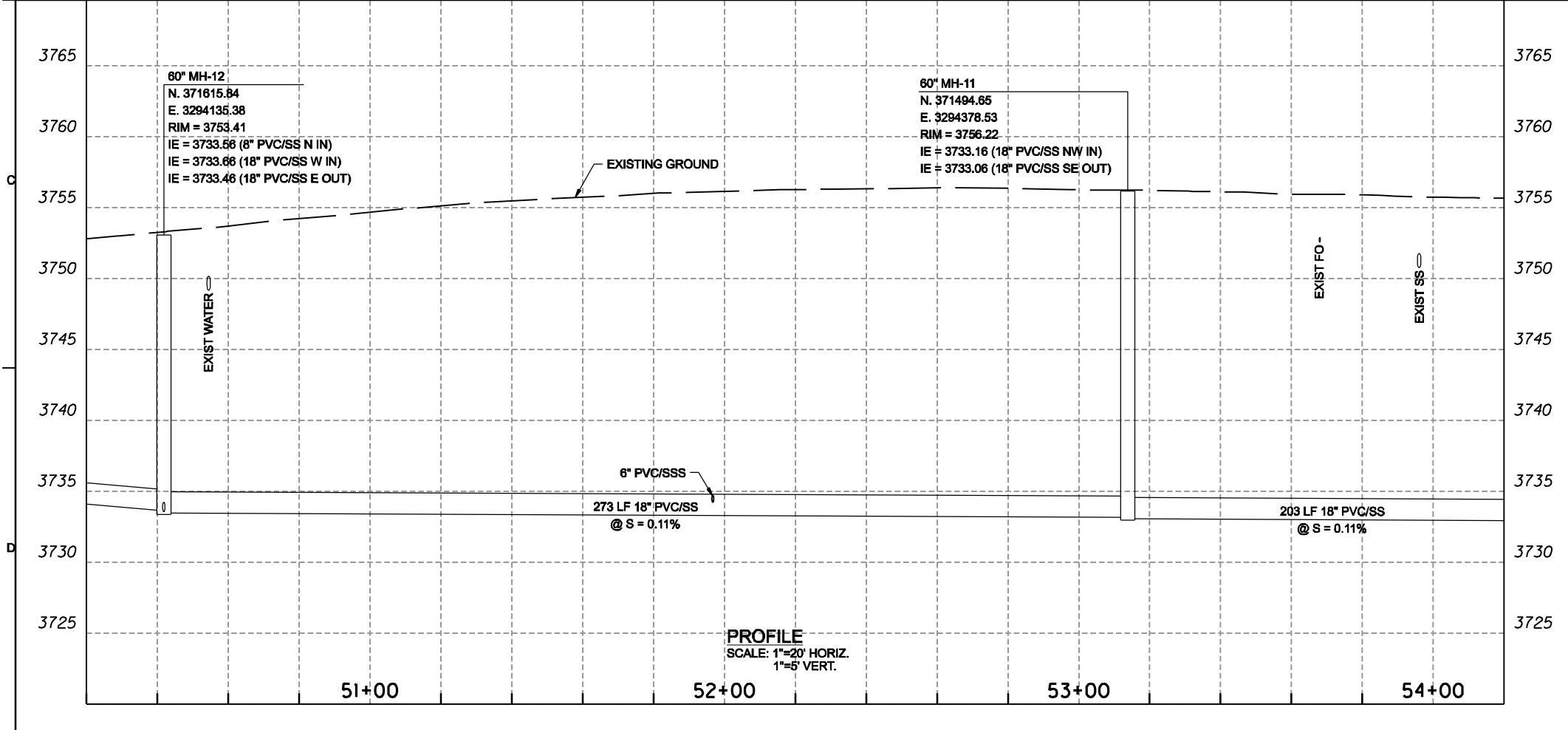
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		J. STALLARD	R. LUKE	J. McMADE	

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CH2MHILL	SOUTHEAST INTERCEPTOR MURPHY ROAD SEGMENT CITY OF BEND, OREGON
	CIVIL SCHEDULE A SANITARY SEWER PLAN AND PROFILE
	VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1 1'
DATE	MARCH 2010
PROJ	362936
DWG	05-CY-005
SHEET	16 OF 45



- NOTES:**
- 4" OR 6" SANITARY SEWER SERVICE PER CITY OF BEND DETAIL S-15. PROVIDE SERVICE CONNECTION MARKER AS DETAILED IN CITY OF BEND STANDARD SPECIFICATION 00400.
 - ALL EXISTING SANITARY SEWER LINES ARE PRESSURIZED.
 - CONSTRUCT PROPOSED MANHOLE OVER EXISTING STONE HAVEN FORCEMAIN. CAP AND ABANDON STONE HAVEN FORCEMAIN FROM MANHOLE TO MURPHY ROAD FORCEMAIN.
 - LOCATION OF SERVICE LATERAL SHALL BE FIELD ADJUSTED TO ALIGN WITH HOME OWNER SERVICE LATERAL LOCATION.
 - HDPE MANHOLE PER CITY OF BEND DETAIL S-14.
 - PRECAST CONCRETE MANHOLE PER DETAIL S-3R WITH EPOXY LINER PER CITY OF BEND STANDARD SPECIFICATION 00400.
 - CONTRACTOR TO COORDINATE WITH ROATS WATER FOR UTILIZATION OF TRAFFIC CONTROL IN ORDER FOR ROATS TO UPGRADE EXISTING SERVICE LATERAL MATERIAL. ROATS TO BE RESPONSIBLE FOR INSTALLATION WITH CONTRACTOR PROVIDING TRAFFIC CONTROL. REFER TO SECTION 150.50 PROJECT SPECIALS FOR COORDINATION REQUIREMENTS.
 - MANHOLE - 12A
RIM = 3752.31
IE = 3734.94 (8" PVC SS NE IN)
IE = 3734.84 (8" PVC SS S OUT)
 - MANHOLE - 12B
RIM = 3752.03
IE = 3748 +/- (8" PVC SS SW OUT) (FIELD VERIFY FM DEPTH)
 - PAVING PAY LIMITS 10' BEYOND PROPOSED MANHOLE.



FOR SIGNATURES AND SEALS REFER TO ORIGINAL DRAWINGS, DATED DEC 2009

NO.	DATE	DR	CHK	APVD	APPROVED-BY

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CH2MHILL

CIVIL

SCHEDULE A

SANITARY SEWER

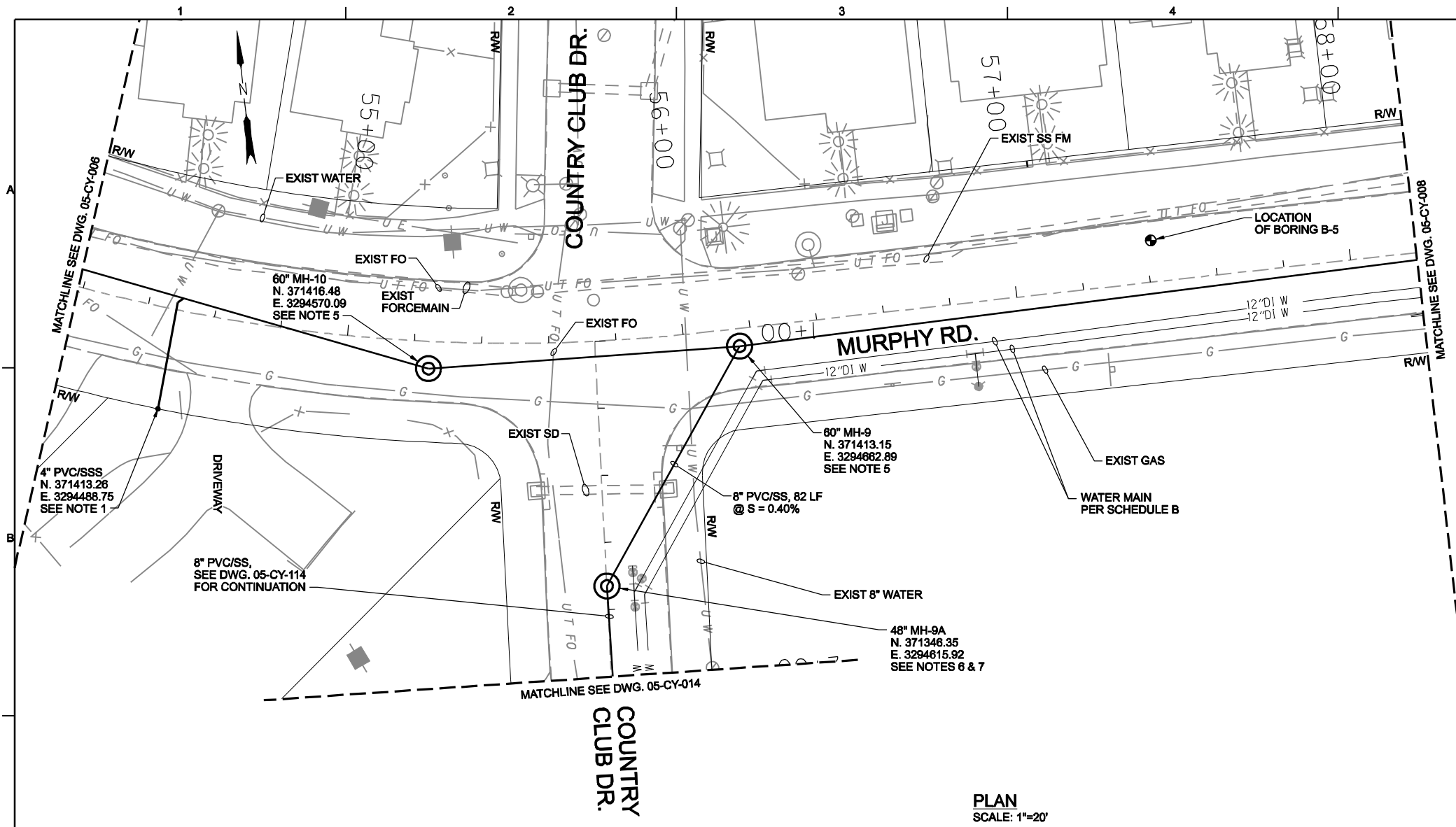
PLAN AND PROFILE

SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

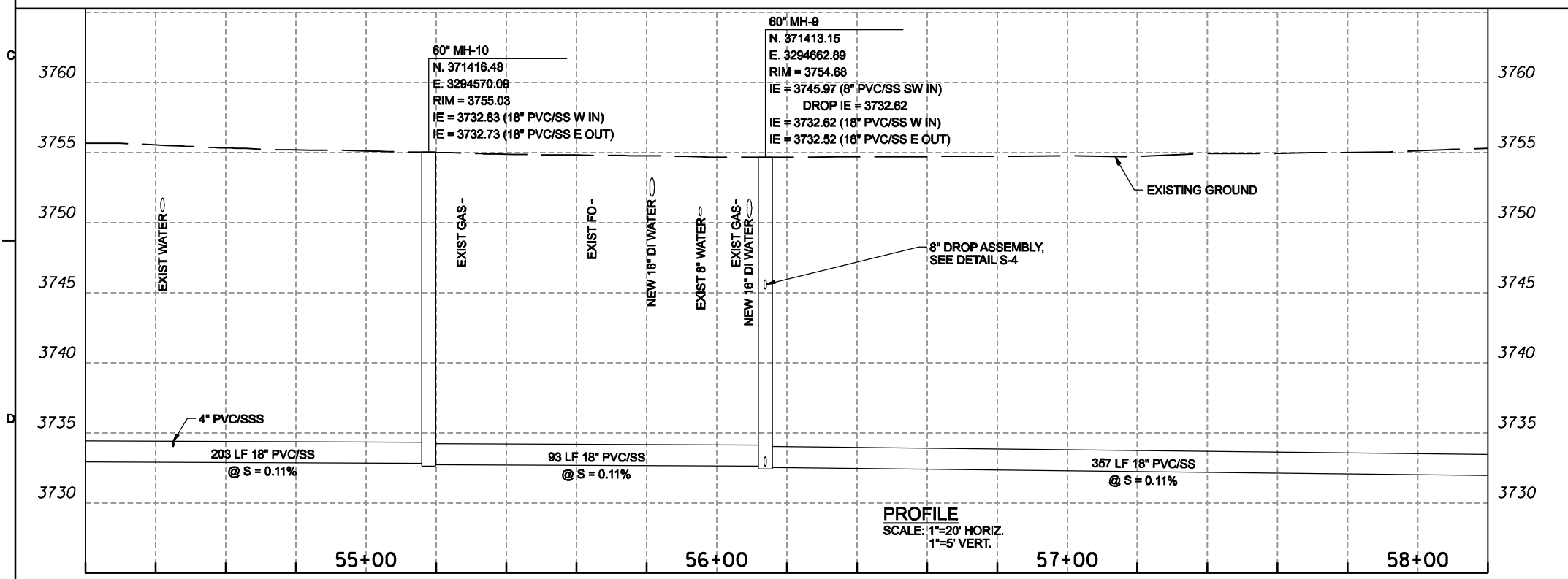


VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE	MARCH 2010
PROJ	362936
DWG	05-CY-006
SHEET	17 OF 45



PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ.
1"=5' VERT.

NOTES:

- 4" SANITARY SEWER SERVICE PER CITY OF BEND DETAIL S-15. PROVIDE SERVICE CONNECTION MARKER AS DETAILED IN CITY OF BEND STANDARD SPECIFICATION 00400.
- UTILITY DEPTH INFORMATION FROM OTAK POTHOLING DATA REPORT OCTOBER 30, 2008.
- ALL EXISTING SANITARY SEWER LINES ARE PRESSURIZED.
- LOCATION OF SERVICE LATERAL SHALL BE FIELD ADJUSTED TO ALIGN WITH HOME OWNER SERVICE LATERAL LOCATION.
- HDPE MANHOLE PER CITY OF BEND DETAIL S-14.
- PRECAST CONCRETE MANHOLE PER DETAIL S-3R WITH EPOXY LINER PER CITY OF BEND STANDARD SPECIFICATION 00400.
- MANHOLE - 9A
RIM = 3756.17
IE = 3746.40 (8" PVC/SS IN)
IE = 3746.30 (8" PVC/SS OUT)

FOR
SIGNATURES
AND SEALS REFER
TO ORIGINAL
DRAWINGS, DATED
DEC 2009

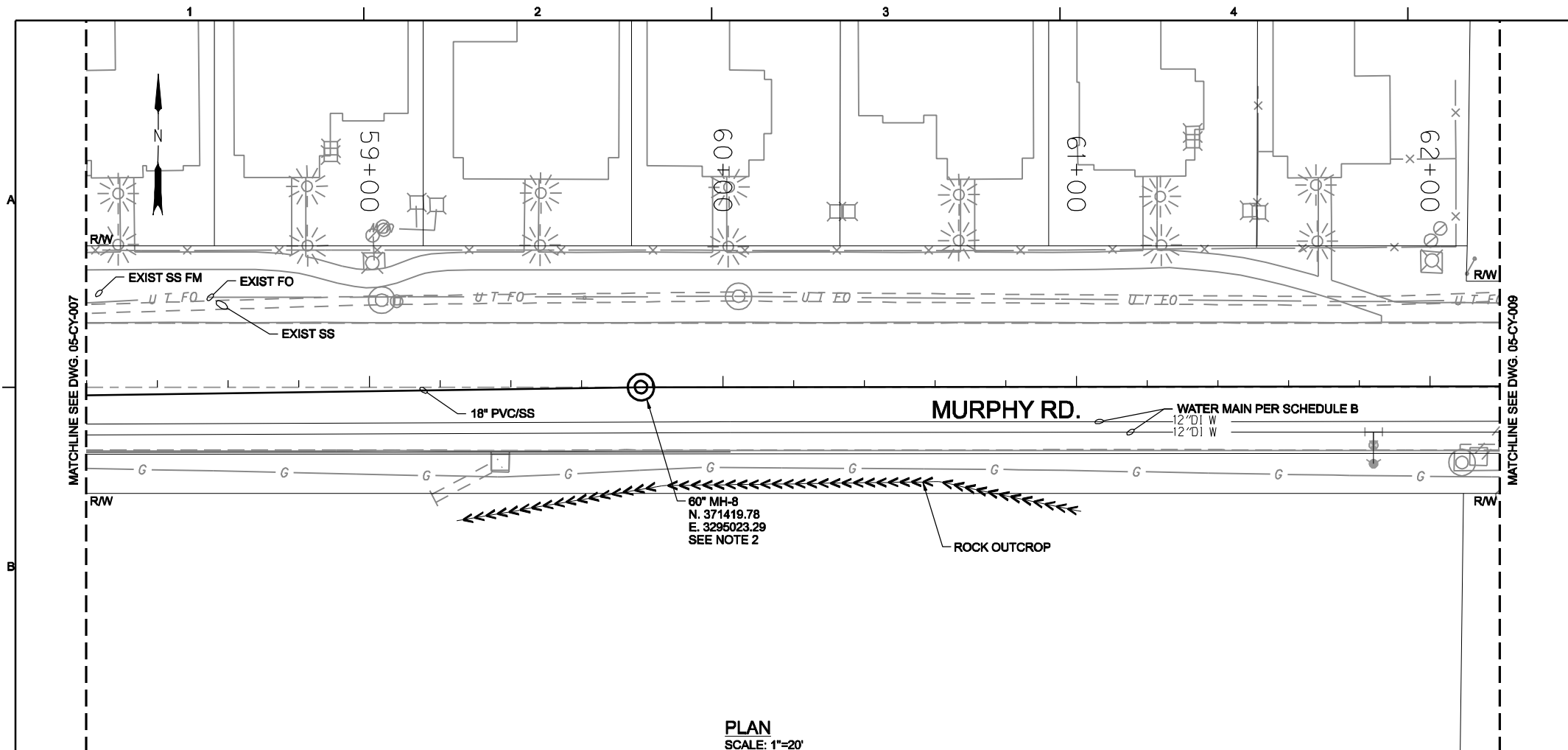
NO.	DATE	DR	CHK	APVD	APPROVED-BY
		J. STALLARD	R. LUKE	J. McMADE	

SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

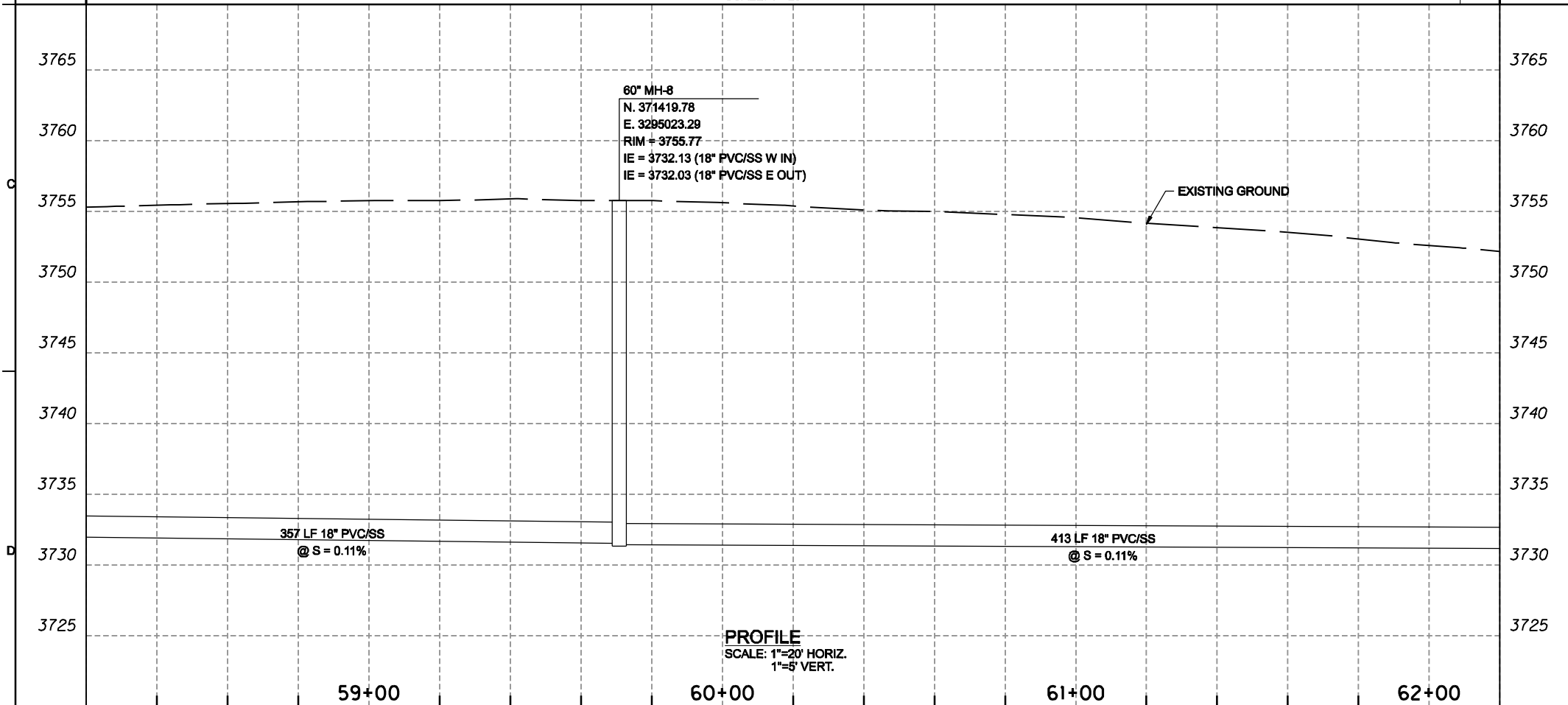
CH2MHILL
CIVIL
SCHEDULE A
SANITARY SEWER
PLAN AND PROFILE

VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	MARCH 2010
PROJ	362936
DWG	05-CY-007
SHEET	18 OF 45





PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ.
1"=5' VERT.

- NOTES:**
1. ALL EXISTING SANITARY SEWER LINES ARE PRESSURIZED.
 2. HDPE MANHOLE PER CITY OF BEND DETAIL S-14.

FOR
SIGNATURES
AND SEALS REFER
TO ORIGINAL
DRAWINGS, DATED
DEC 2009

NO.	DATE	DR	CHK	APVD	BY	APVD
		J. STALLARD	R. LUKE	J. McMADE		
		DSGN	REVISION	APVD	BY	APVD

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CH2MHILL

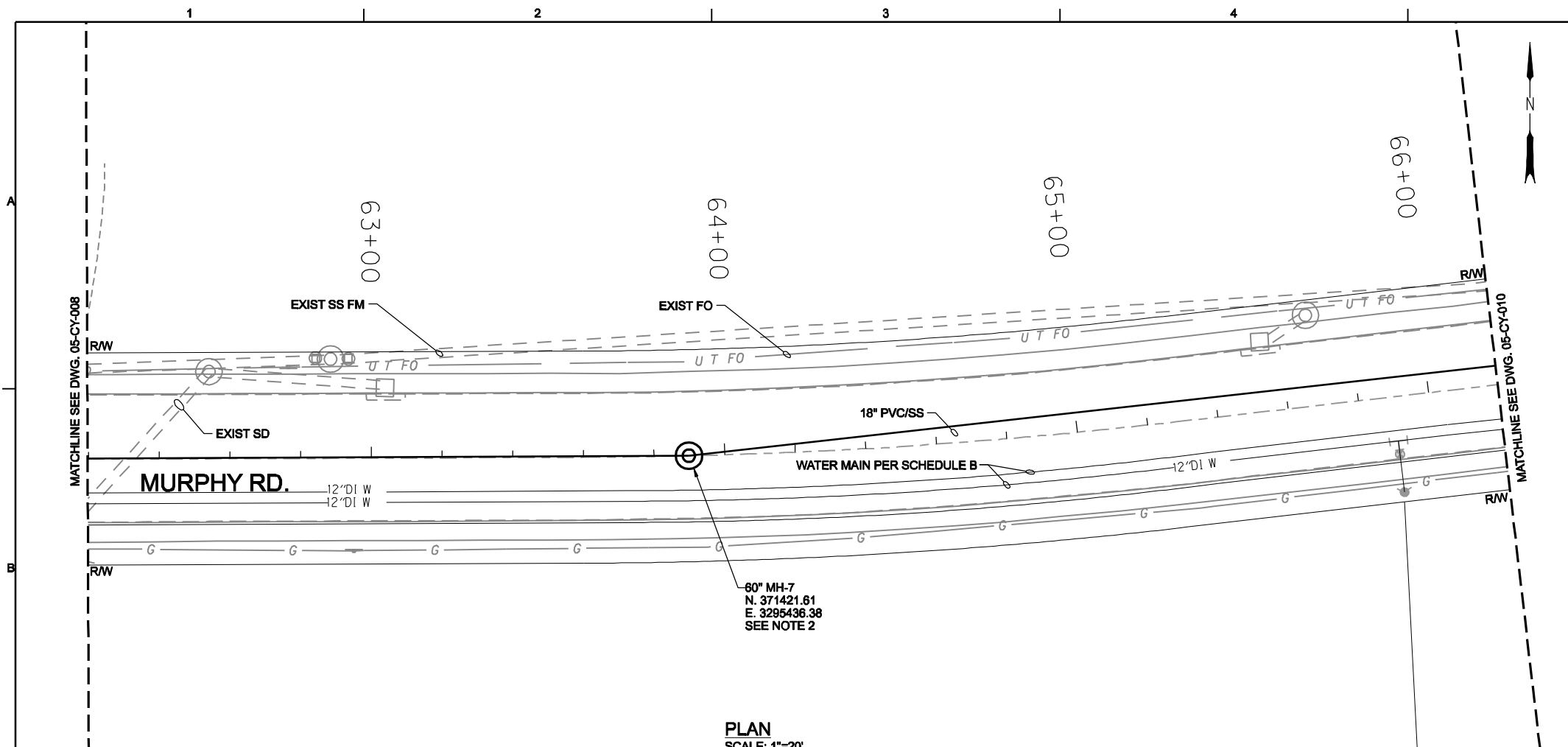
CIVIL
SCHEDULE A
SANITARY SEWER
PLAN AND PROFILE

SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

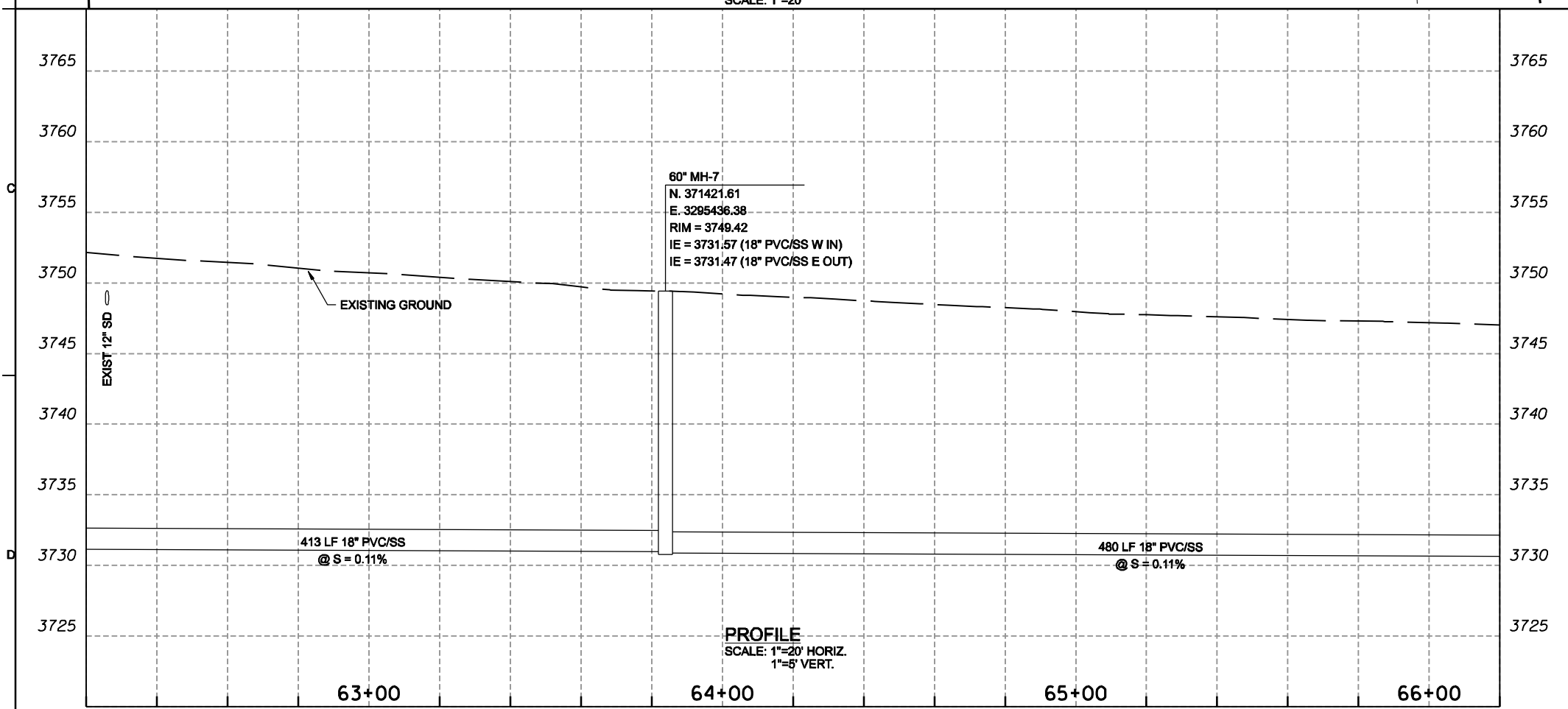
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1 1'

DATE MARCH 2010
PROJ 362936
DWG 05-CY-008
SHEET 19 OF 45





PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ.
1"=8' VERT.

- NOTES:**
1. ALL EXISTING SANITARY SEWER LINES ARE PRESSURIZED.
 2. HDPE MANHOLE PER CITY OF BEND DETAIL S-14.

FOR SIGNATURES AND SEALS REFER TO ORIGINAL DRAWINGS, DATED DEC 2009

NO.	DATE	DR	CHK	APVD	APPROVED-BY
		J. STALLARD	R. LUKE	J. McMADE	

CH2MHILL

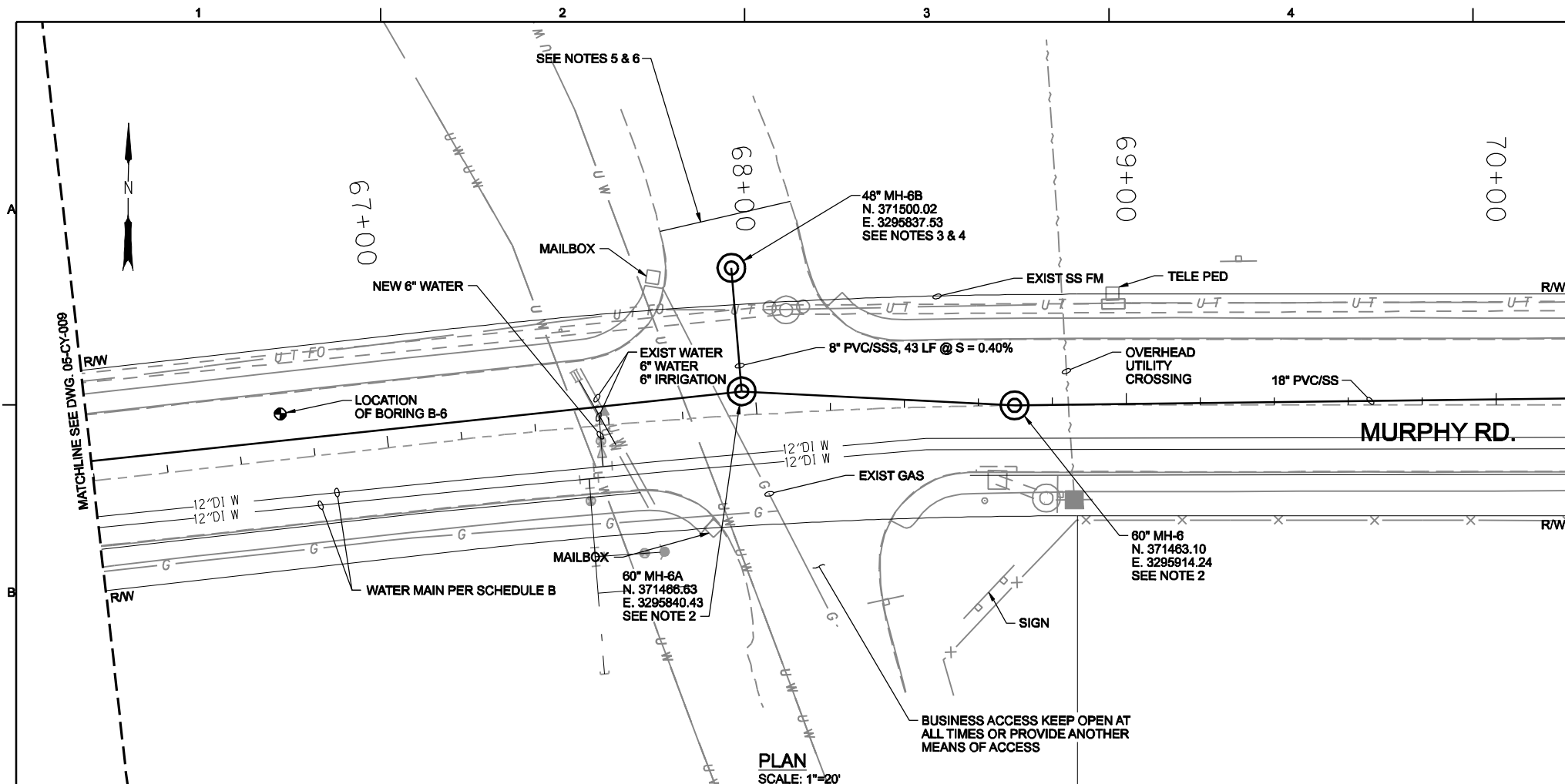
CIVIL
SCHEDULE A
SANITARY SEWER
PLAN AND PROFILE

SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

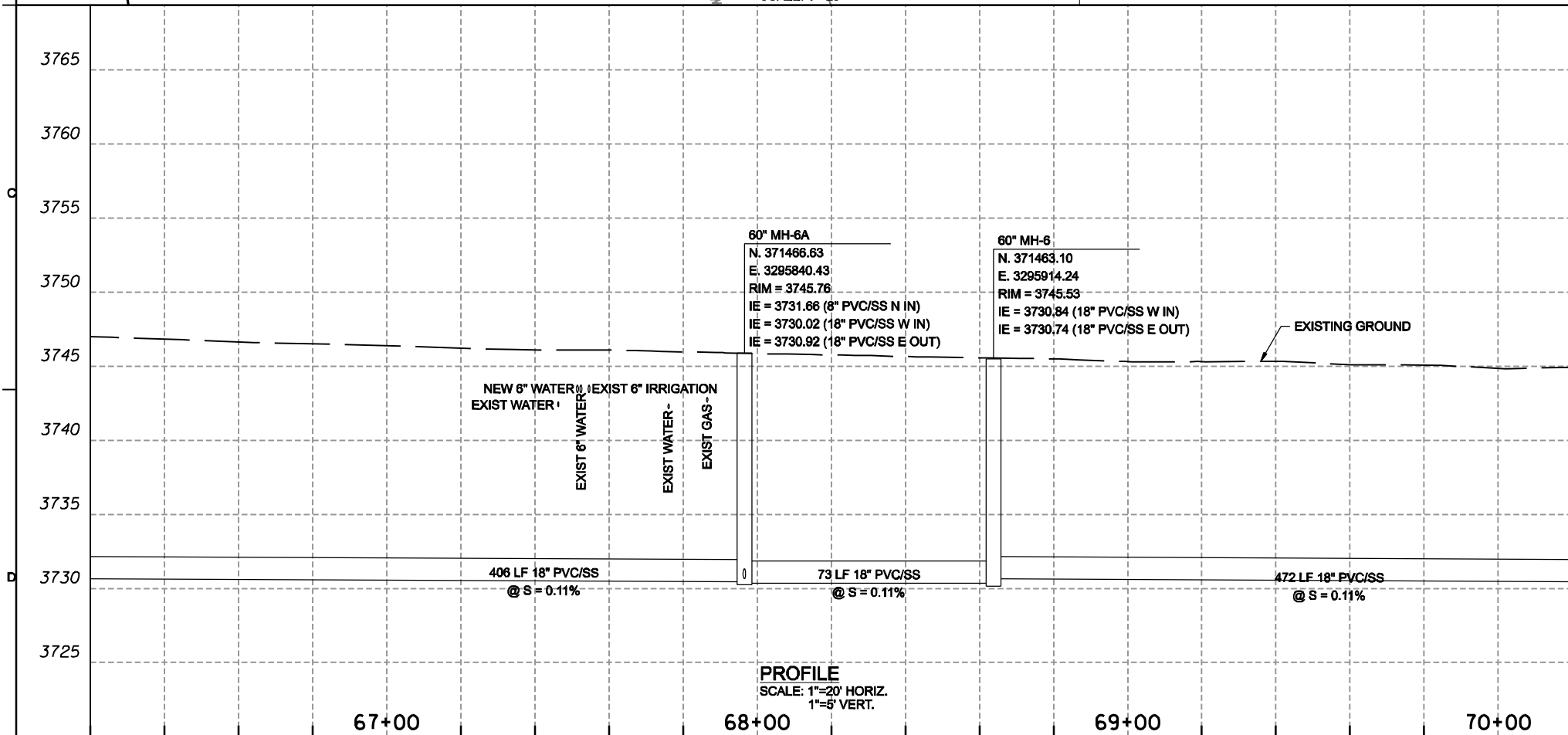
VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1'	
DATE	MARCH 2010
PROJ	362936
DWG	05-CY-009
SHEET	20 OF 45



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- NOTES:**
- ALL EXISTING SANITARY SEWER LINES ARE PRESSURIZED.
 - HDPE MANHOLE PER CITY OF BEND DETAIL S-14.
 - PRECAST CONCRETE MANHOLE PER DETAIL S-3R WITH EPOXY LINER PER BEND STANDARD SPECIFICATION 00400.
 - MANHOLE - 6B
RIM = 3746.66
IE = 3732.02 (8" PVC/SS S OUT)
 - EXISTING PRIVATE ACCESS DRIVE TO BE USED AS TEMPORARY PUBLIC ACCESS. REMOVE ROCK BERM BOTH SIDES (NORTH AND SOUTH) AND PROVIDE SMOOTH VEHICLE ACCESS. REPLACE ROCK BERM AT END OF PROJECT.
 - PAVING PAY LIMITS 10' BEYOND PROPOSED MANHOLE.
 - PROVIDE SOLID CENTERLINE STRIPING DOWN PRIVATE ACCESS DRIVE AND REMOVE ONCE CONSTRUCTION IS COMPLETE.



FOR SIGNATURES AND SEALS REFER TO ORIGINAL DRAWINGS, DATED DEC 2009

NO.	DATE	DR	CHK	APVD	APPROVED-BY
		J. STALLARD	R. LUKE	J. McMADE	

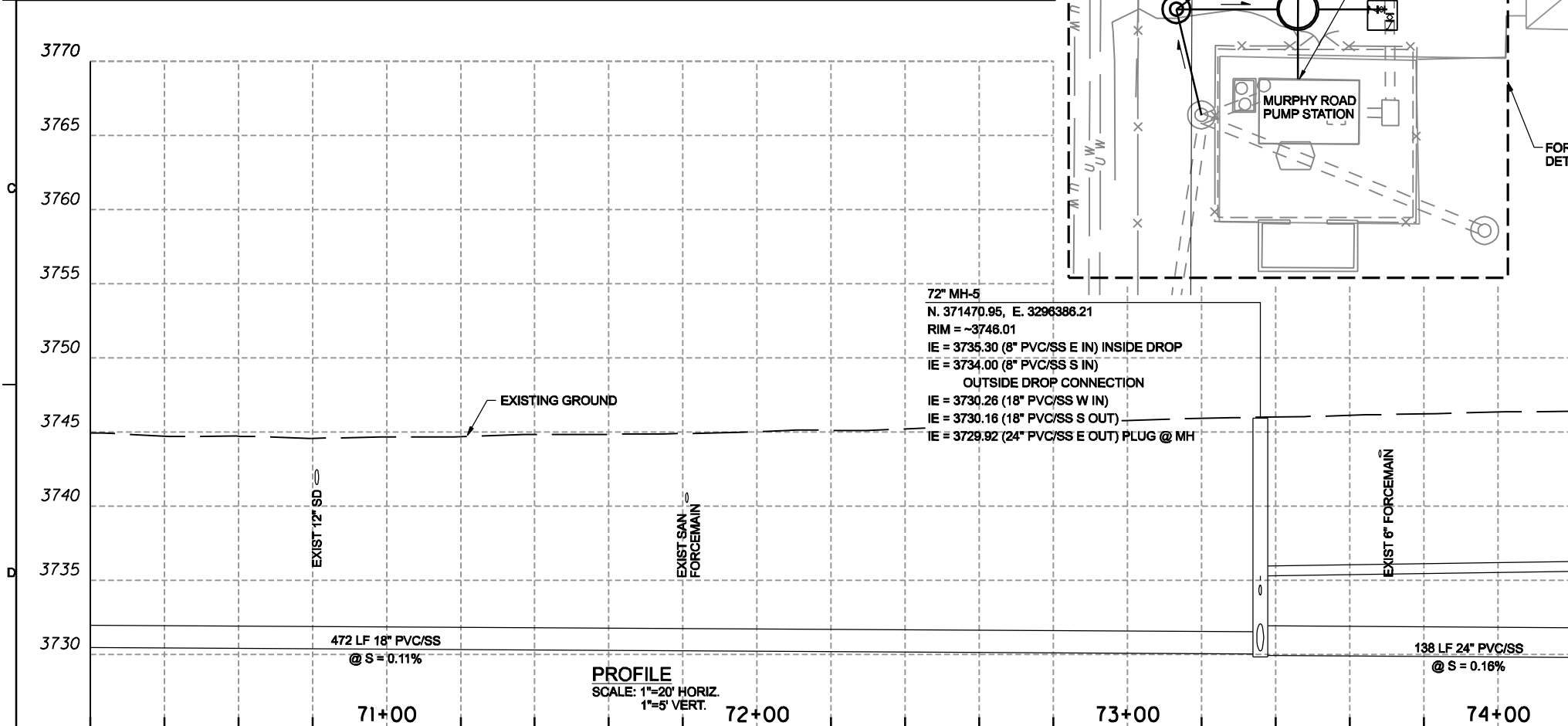
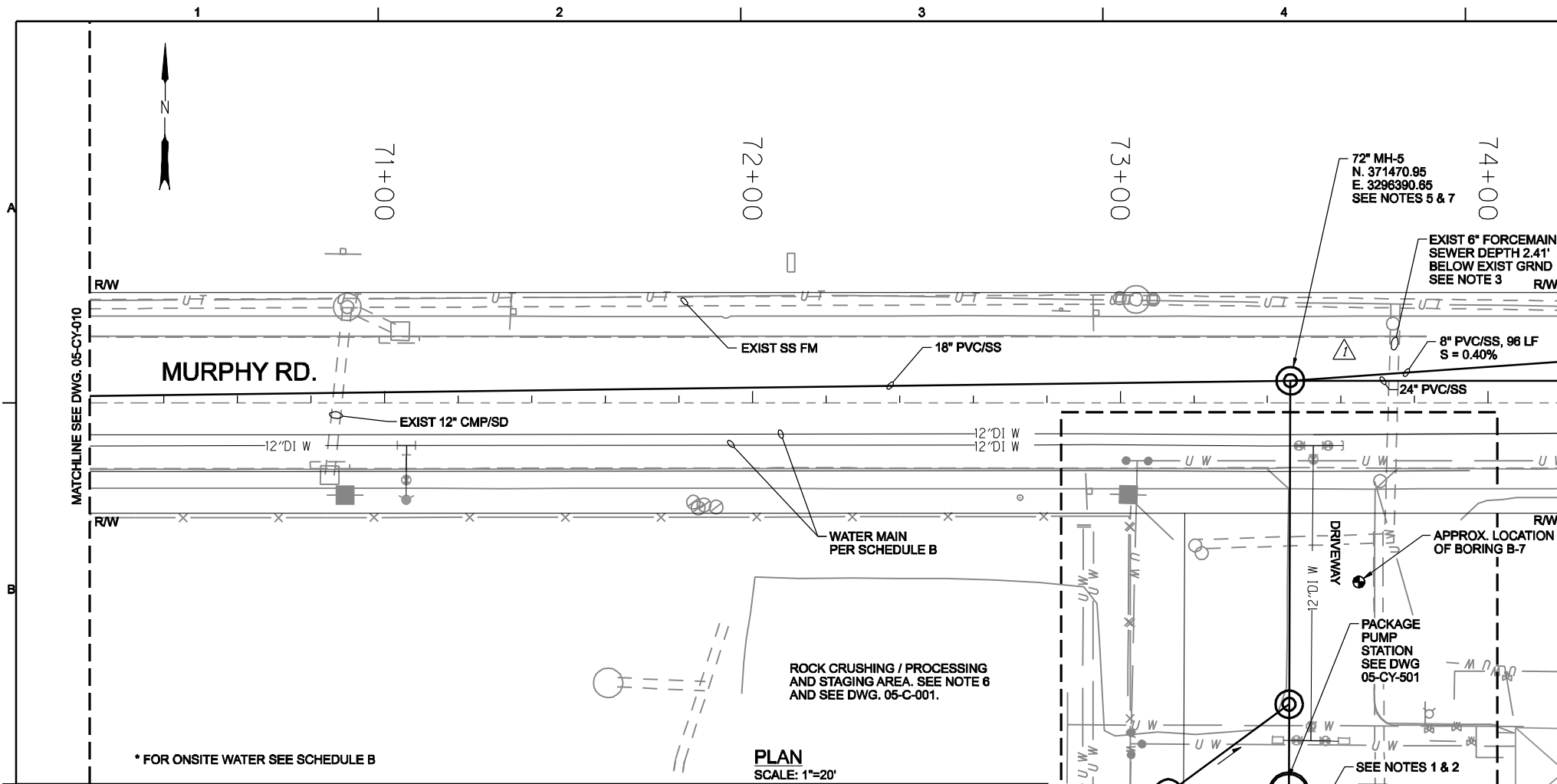
CH2MHILL
 CIVIL
 SCHEDULE A
 SANITARY SEWER
 PLAN AND PROFILE

SOUTHEAST INTERCEPTOR
 MURPHY ROAD SEGMENT
 CITY OF BEND, OREGON



VERIFY SCALE
 BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE	MARCH 2010
PROJ	362936
DWG	05-CY-010
SHEET	21 OF 45



- NOTES:**
- CORE DRILL AND SEAL WITH MODULAR MECHANICAL SEAL.
 - CONTRACTOR SHALL PROVIDE TEMPORARY AND QUICKLY REMOVABLE METAL PLATE FOR CORE DRILLING PURPOSES OR COORDINATE WITH OWNER TO CONTROL WATER LEVEL.
 - UTILITY DEPTH INFORMATION FROM OTAK POTHOLING DATA REPORT OCTOBER 30, 2008.
 - NOTE NOT USED
 - HDPE MANHOLE PER CITY OF BEND DETAIL S-14.
 - LAND USED FOR ROCK CRUSHING PROCESSES, EQUIPMENT OR SUPPLY STORAGE SHALL BE RETURNED TO ORIGINAL CONDITION. THIS INCLUDES CLEANING, GRADING, AND SEEDING.
 - PLUG 24" PVC OUTLET EAST USING A WATER TIGHT MECHANICAL PLUG ASSEMBLY.

FOR SIGNATURES AND SEALS REFER TO ORIGINAL DRAWINGS, DATED DEC 2009

NO.	DATE	DR	CHK	APVD	APPROVED-BY
1	1/19/2010	J. STALLARD	R. LUKE	J. McWADE	
ADDENDUM #1					
REVISION					

SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

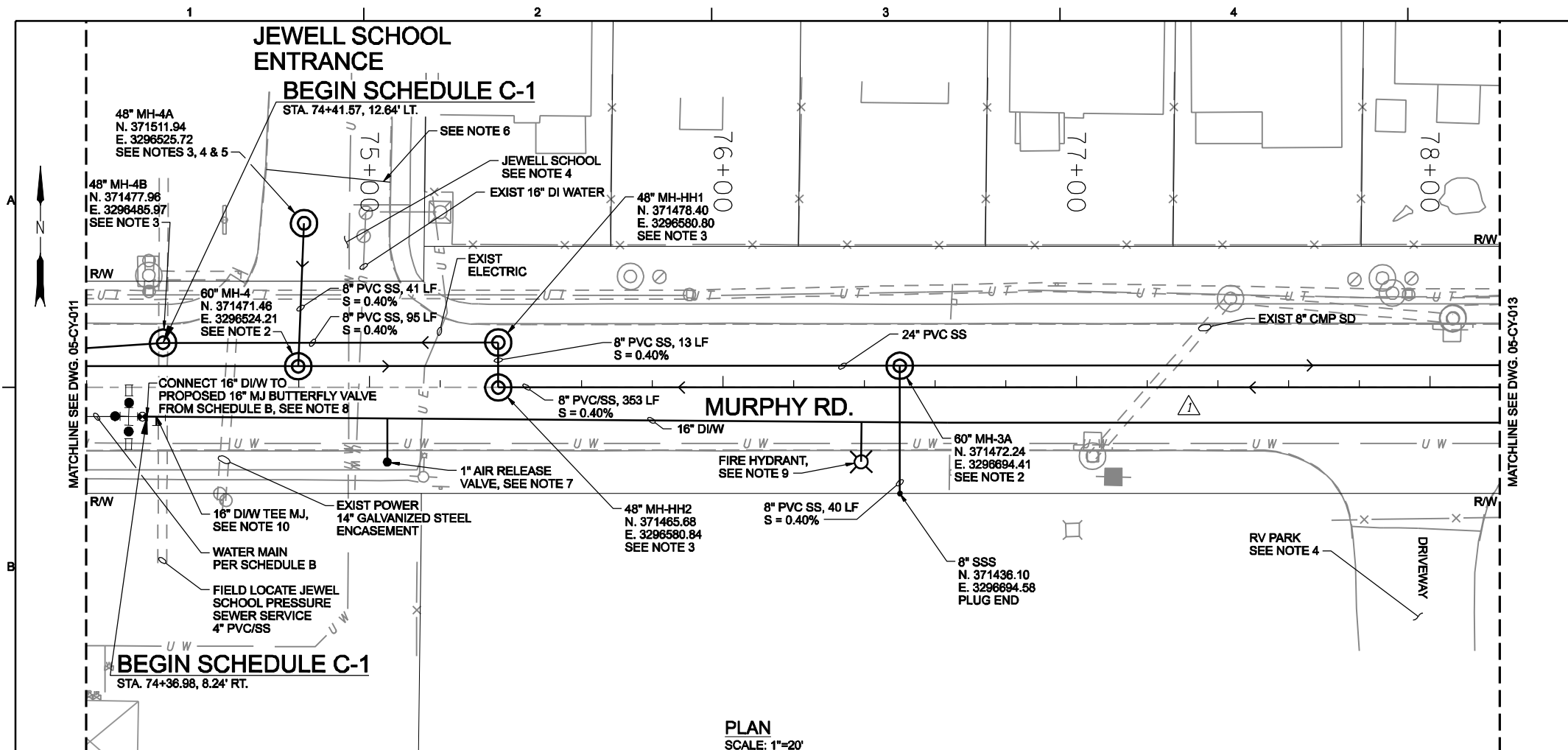
CH2MHILL
CIVIL
SCHEDULE A
SANITARY SEWER
PLAN AND PROFILE

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.

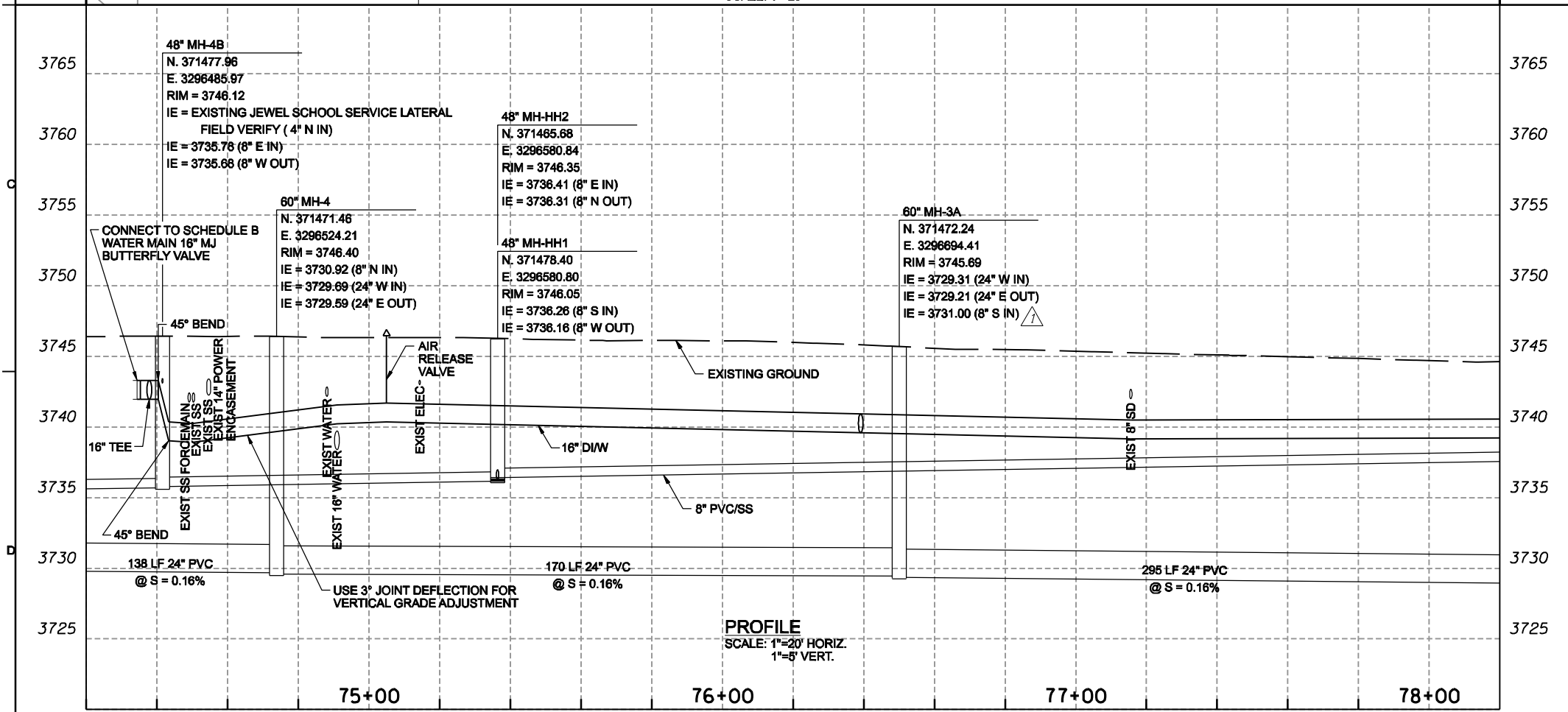
DATE	MARCH 2010
PROJ	362936
DWG	05-CY-011
SHEET	22 OF 45



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PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ.
1"=5' VERT.

- NOTES:
- ALL EXISTING SANITARY SEWER LINES ARE PRESSURIZED.
 - HDPE MANHOLE PER CITY OF BEND DETAIL S-14.
 - PRECAST CONCRETE MANHOLE PER DETAIL S-3R WITH EPOXY LINER PER BEND STANDARD SPECIFICATION 00400.
 - BUSINESS ACCESS KEEP OPEN AT ALL TIMES OR PROVIDE ANOTHER MEANS OF ACCESS.
 - MANHOLE - 4A
RIM = 3745.91
IE = 3731.09 (8" PVC/SS S OUT)
 - PAVING PAY LIMITS 10' BEYOND MANHOLE 4A.
 - AIR RELEASE VALVE PER CITY OF BEND DETAIL W-10.
 - RESTRAIN JOINTS OF 16" DUCTILE IRON PIPE FOR 100 LF ON BOTH SIDES OF VALVE.
 - FIRE HYDRANT ASSEMBLY PER CITY OF BEND DETAILS W-7 AND W-8.
 - 16" DI/W TEE, CAP SOUTH LEG.

FOR SIGNATURES AND SEALS REFER TO ORIGINAL DRAWINGS, DATED DEC 2009

ADDENDUM #2	JSS	APPROVED-BY	J. McMADE
ADDENDUM #1	RDL	BY	R. LUKE
NO.	DATE	CHK	J. STALLARD
1	1/19/2010	DR	
2	1/22/2010	DGN	

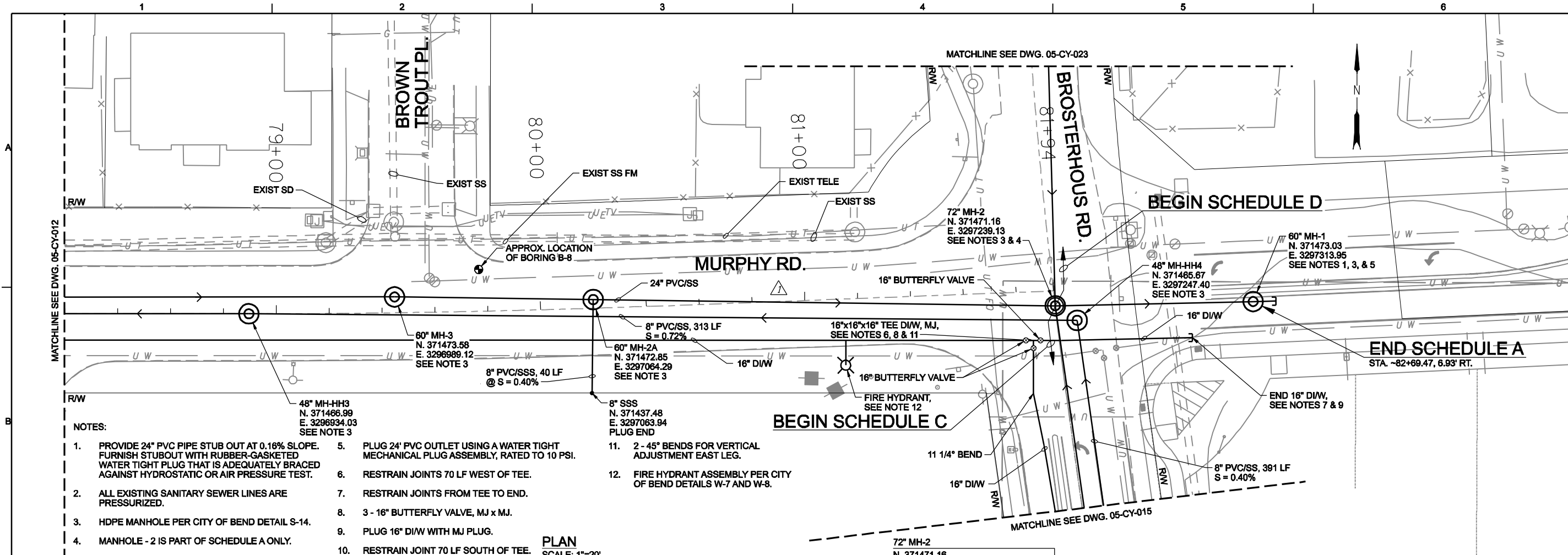
SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

CIVIL
SCHEDULE A
SANITARY SEWER
PLAN AND PROFILE

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.

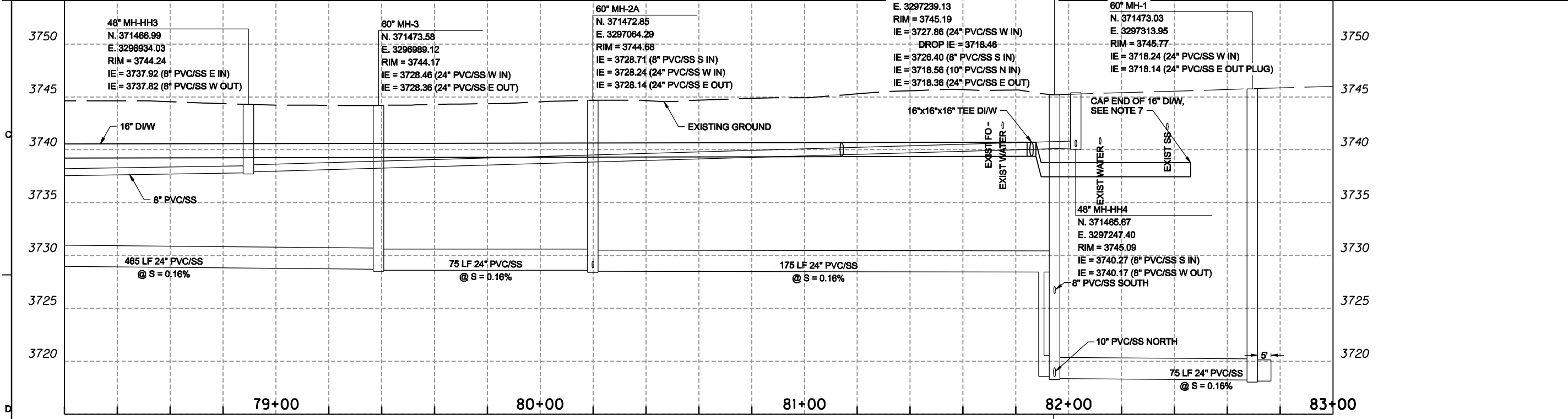
DATE	MARCH 2010
PROJ	362936
DWG	05-CY-012
SHEET	23 OF 45





- NOTES:
1. PROVIDE 24" PVC PIPE STUB OUT AT 0.16% SLOPE. FURNISH STUBOUT WITH RUBBER-GASKETED WATER TIGHT PLUG THAT IS ADEQUATELY BRACED AGAINST HYDROSTATIC OR AIR PRESSURE TEST.
 2. ALL EXISTING SANITARY SEWER LINES ARE PRESSURIZED.
 3. HDPE MANHOLE PER CITY OF BEND DETAIL S-14.
 4. MANHOLE - 2 IS PART OF SCHEDULE A ONLY.
 5. PLUG 24" PVC OUTLET USING A WATER TIGHT MECHANICAL PLUG ASSEMBLY, RATED TO 10 PSI.
 6. RESTRAIN JOINTS 70 LF WEST OF TEE.
 7. RESTRAIN JOINTS FROM TEE TO END.
 8. 3 - 16" BUTTERFLY VALVE, MJ x MJ.
 9. PLUG 16" DI/W WITH MJ PLUG.
 10. RESTRAIN JOINT 70 LF SOUTH OF TEE.
 11. 2 - 45° BENDS FOR VERTICAL ADJUSTMENT EAST LEG.
 12. FIRE HYDRANT ASSEMBLY PER CITY OF BEND DETAILS W-7 AND W-8.

PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ.
1"=5' VERT.

EX. MURPHY RD. STATIONING
ENDS AT 81+94.18

FOR SIGNATURES AND SEALS REFER TO ORIGINAL DRAWINGS, DATED DEC 2009

NO.	DATE	DR	CHK	APVD	APPROVED-BY
1	1/19/2010	J. STALLARD	R. LUKE	J. McMADE	J. McMADE
ADDENDUM #1		REVISION	BY	APVD	APPROVED-BY

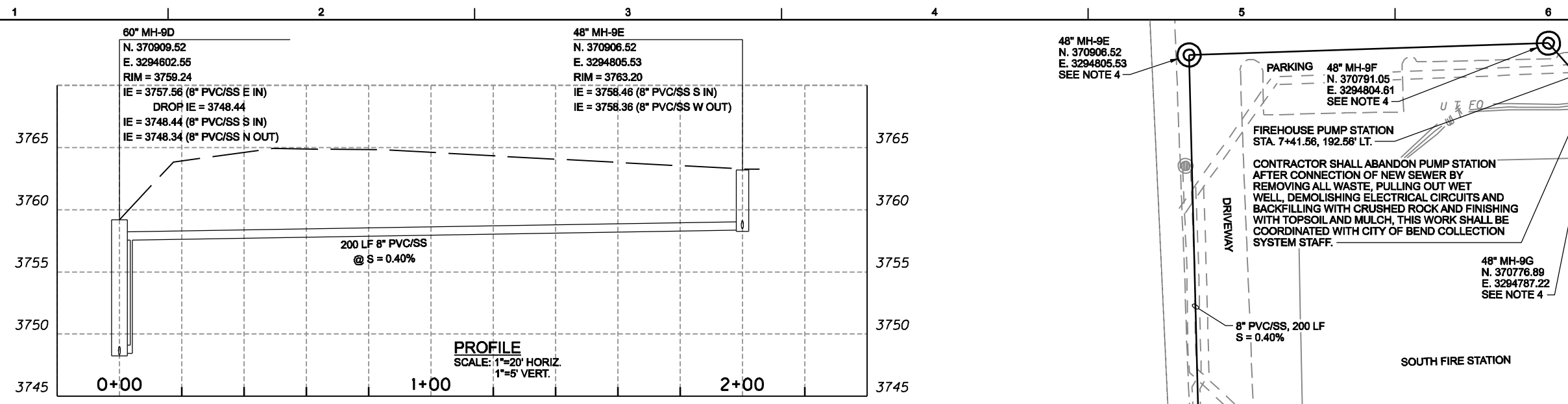
SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

CH2MHILL
CIVIL
SCHEDULE A
SANITARY SEWER
PLAN AND PROFILE

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.

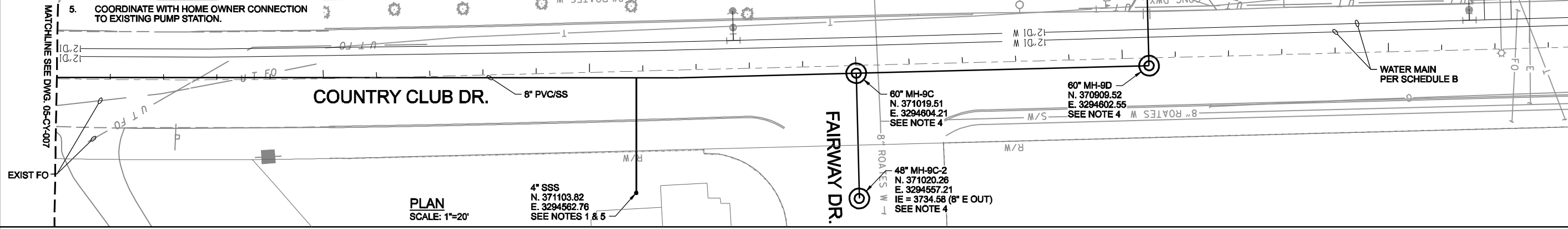
DATE	MARCH 2010
PROJ	362936
DWG	05-CY-013
SHEET	24 OF 45

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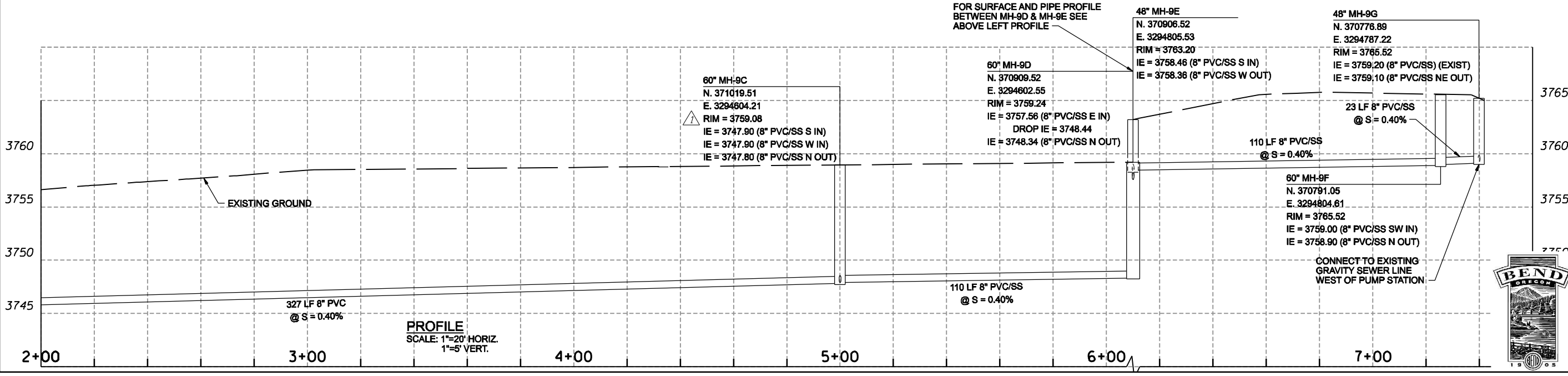


PROFILE
SCALE: 1"=20' HORIZ.
1"=5' VERT.

- NOTES:**
- 4" SANITARY SEWER SERVICE PER DETAIL S-15. PROVIDE SERVICE CONNECTION MARKER AS DETAILED IN BEND STANDARD SPECIFICATION 00400.
 - ALL EXISTING SANITARY SEWER LINES ARE PRESSURIZED.
 - HDPE MANHOLE PER CITY OF BEND DETAIL S-14.
 - PRECAST CONCRETE MANHOLE FOR DETAIL S-3R WITH EPOXY LINER PER BEND STANDARD SPECIFICATION 00400.
 - COORDINATE WITH HOME OWNER CONNECTION TO EXISTING PUMP STATION.



PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ.
1"=5' VERT.

FOR SIGNATURES AND SEALS REFER TO ORIGINAL DRAWINGS, DATED DEC 2009

NO.	DATE	REVISION	BY	APPROVED-BY
1	3/11/2010	ADDENDUM #1	JSS	J. McMADE

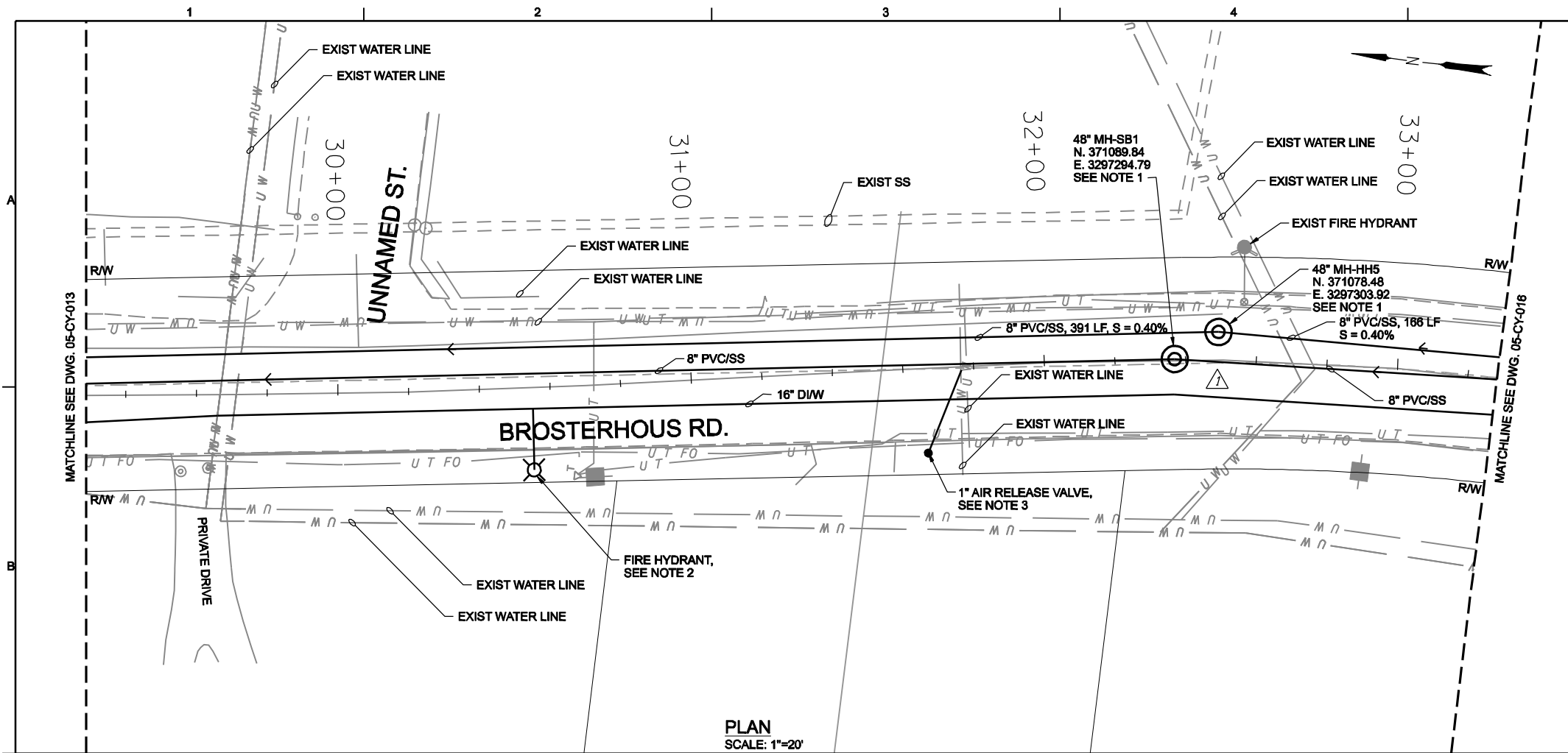
SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

CH2MHILL
CIVIL
SCHEDULE A
COUNTRY CLUB DRIVE SANITARY SEWER
PLAN AND PROFILE

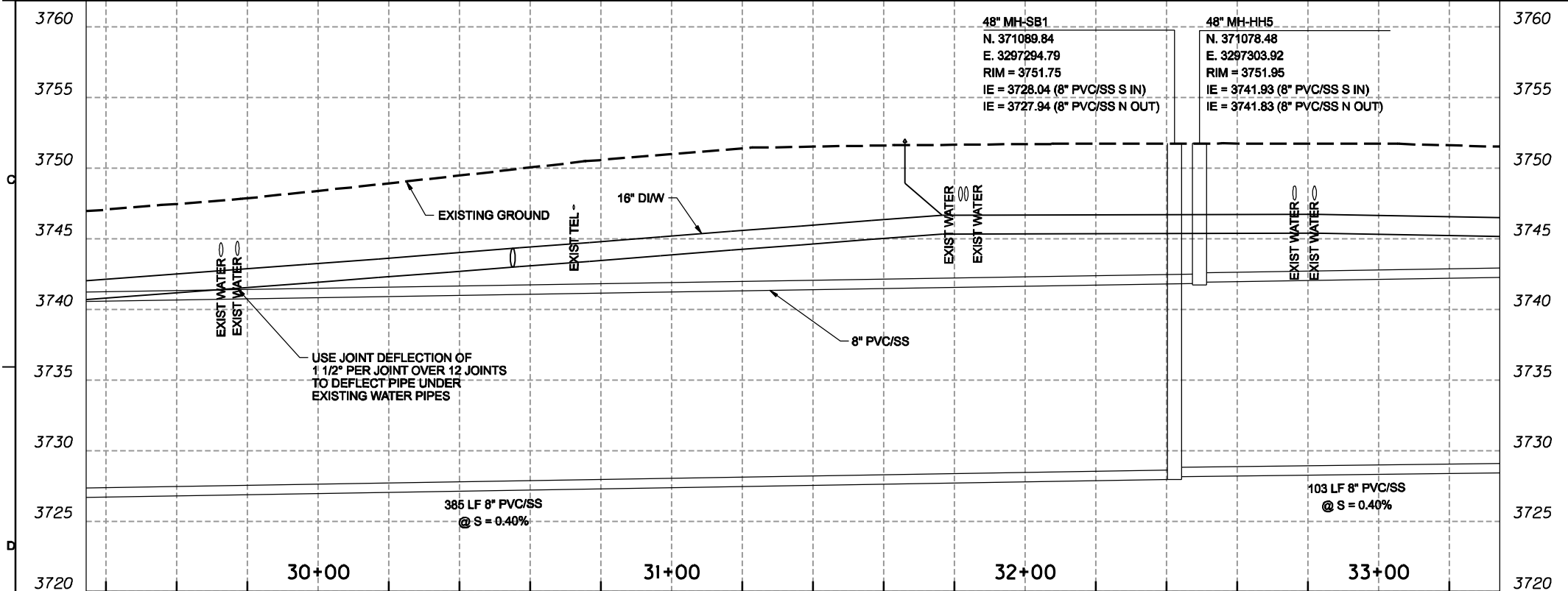
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

DATE MARCH 2010
PROJ 362936
DWG 05-CY-014
SHEET 25 OF 45

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PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ.
1"=5' VERT.

- NOTES:**
1. PRECAST MANHOLE WITH EPOXY LINER PER CITY OF BEND STANDARD SPECIFICATION 00400.
 2. FIRE HYDRANT ASSEMBLY PER CITY OF BEND DETAILS W-7 AND W-8.
 3. AIR RELEASE VALVE PER CITY OF BEND DETAIL W-10.

FOR
SIGNATURES
AND SEALS REFER
TO ORIGINAL
DRAWINGS, DATED
DEC 2009

NO.	1	DATE	1/19/2010	ADDENDUM #1	REVISION	CHK	APVD	APPROVED-BY
DGN								J. McMADE
DR								R. LUKE
								J. STALLARD

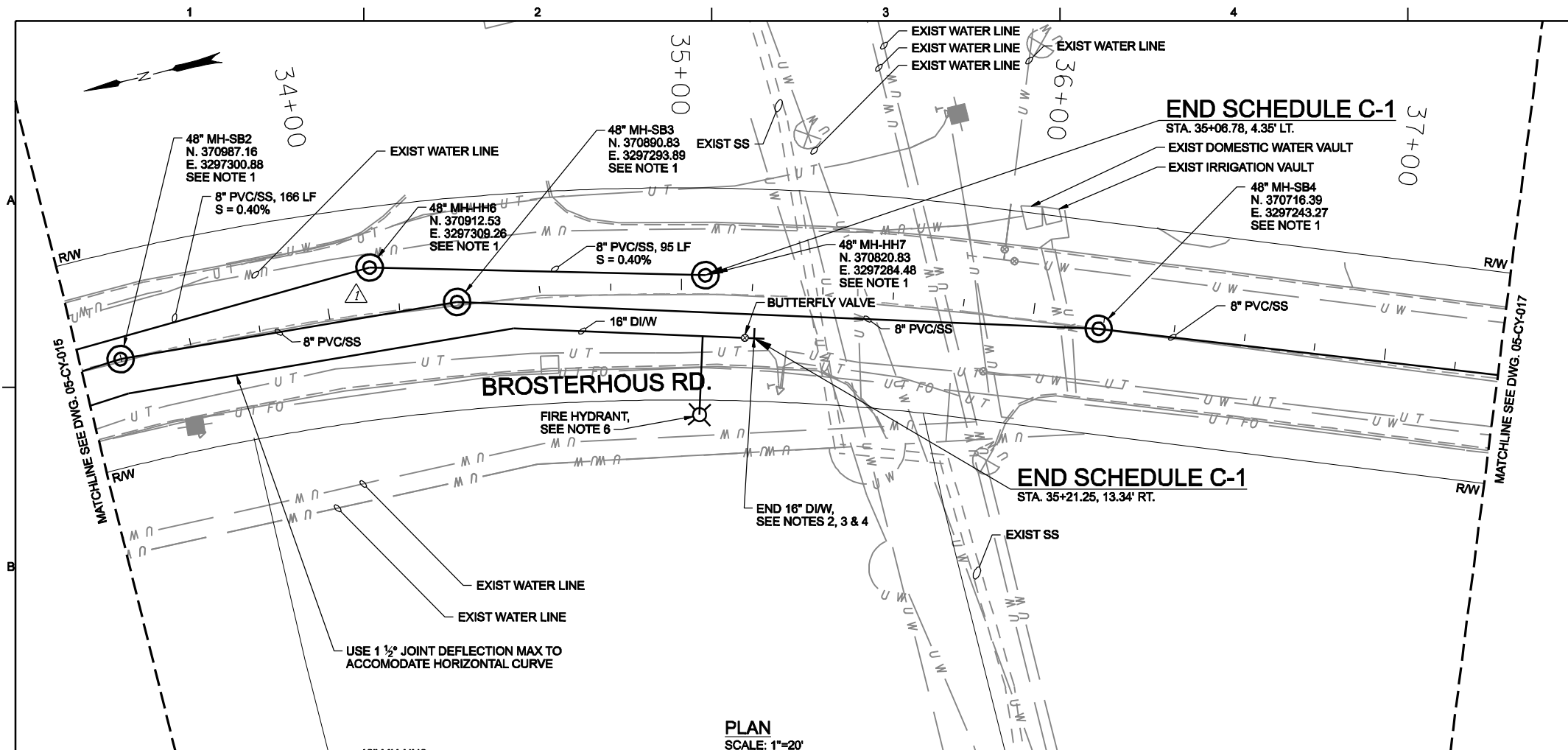
SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

CH2MHILL
CIVIL
SCHEDULE C
SOUTH BROSTERHAUS SANITARY SEWER
PLAN AND PROFILE

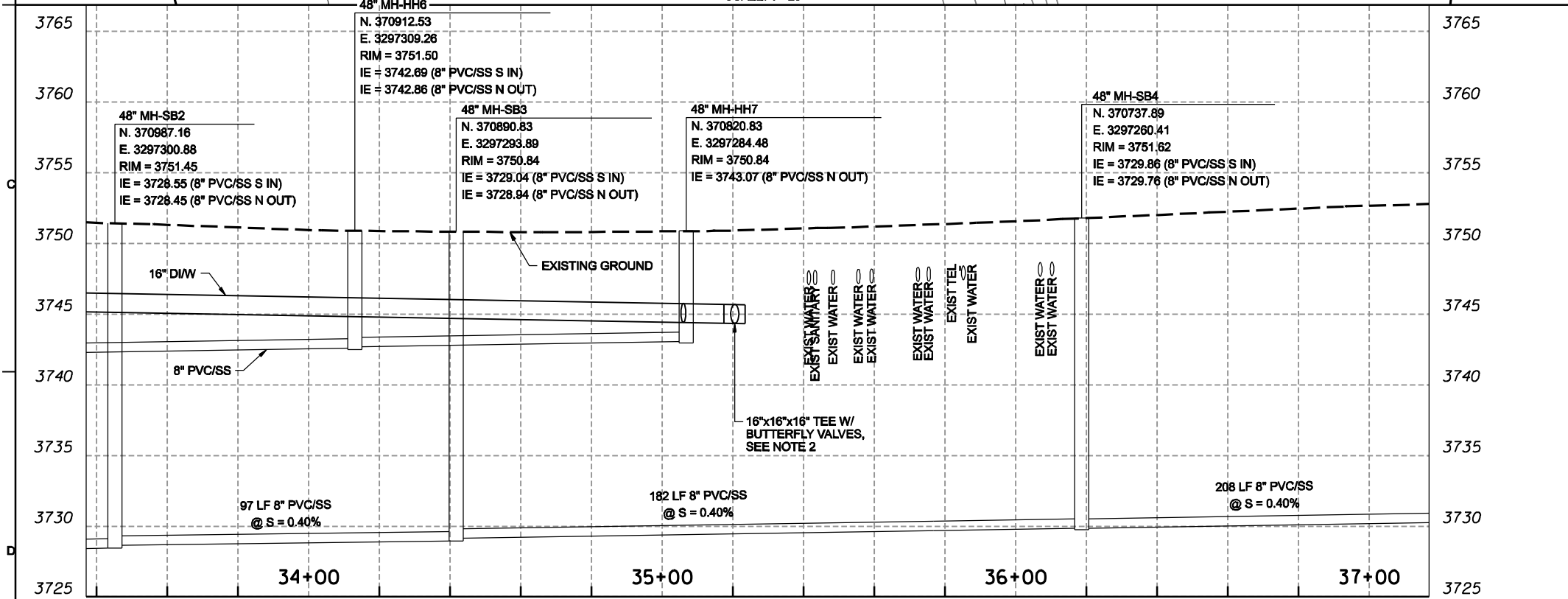
VERIFY SCALE
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DATE	MARCH 2010
PROJ	362936
DWG	05-CY-015
SHEET	26 OF 45





PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ.
1"=5' VERT.

- NOTES:
1. PRECAST MANHOLE WITH EPOXY LINER PER CITY OF BEND STANDARD SPECIFICATION 00400.
 2. RESTRAIN 16" DIW PIPE FOR 100 LF PRIOR TO TEE.
 3. CAP 16" DIW, EAST AND SOUTH.
 4. 16"x16"x16" MJ TEE.
 5. 16" BUTTERFLY VALVE MJ x MJ.
 6. FIRE HYDRANT ASSEMBLY PER CITY OF BEND DETAILS W-7 AND W-8.

FOR SIGNATURES AND SEALS REFER TO ORIGINAL DRAWINGS, DATED DEC 2009

NO.	DATE	BY	APPROVED-BY
1	1/19/2010	R. LUKE	J. McMADE
REVISION		CHK	APVD
ADDENDUM #1		DR	APVD

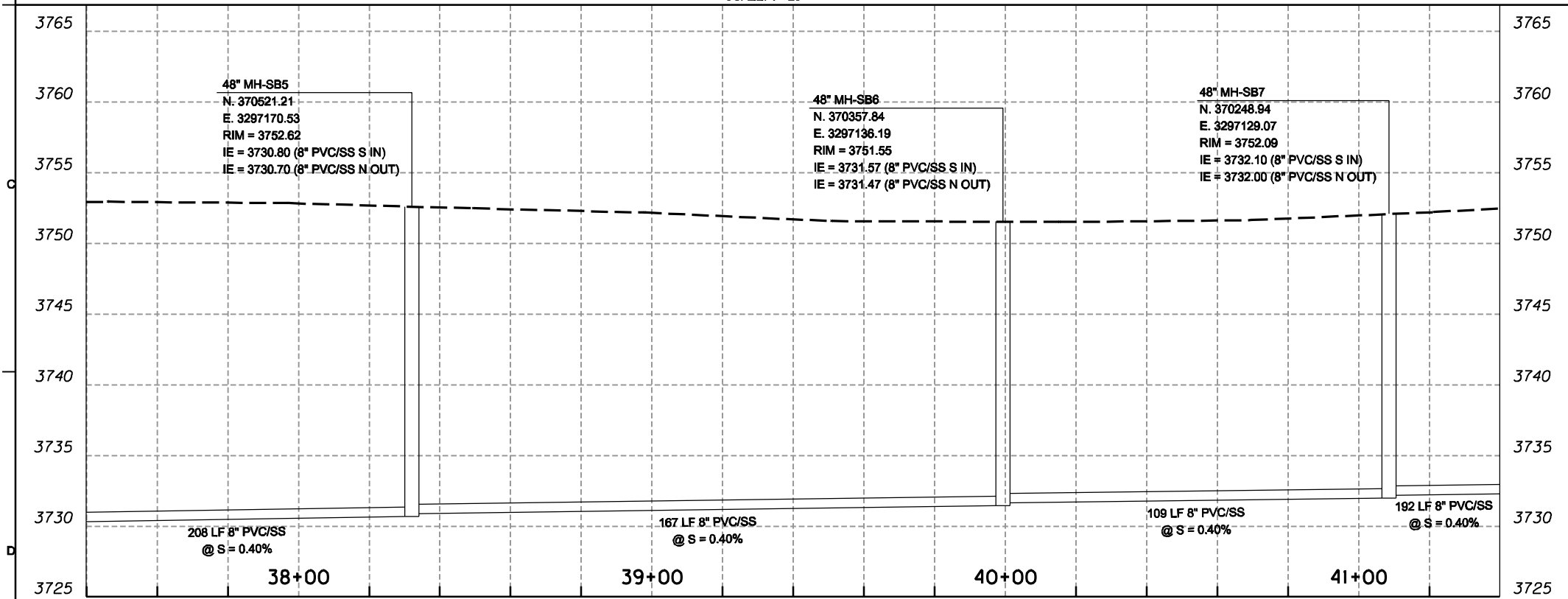
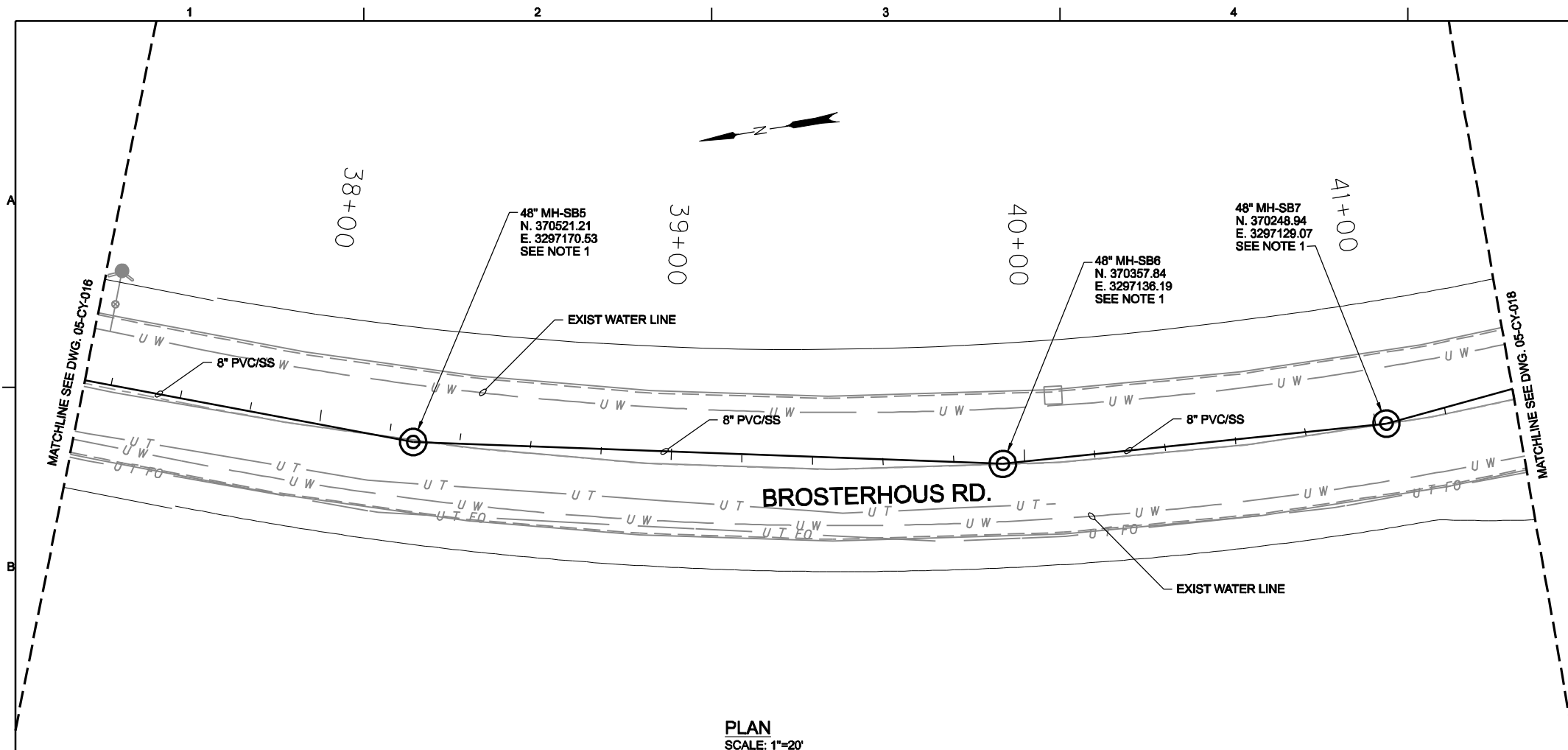
SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

CIVIL
SCHEDULE C
SOUTH BROSTERHAUS SANITARY SEWER
PLAN AND PROFILE

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE	MARCH 2010
PROJ	362936
DWG	05-CY-016
SHEET	27 OF 45





- NOTES:
1. PRECAST MANHOLE WITH EPOXY LINER PER CITY OF BEND STANDARD SPECIFICATION 00400.

FOR SIGNATURES AND SEALS REFER TO ORIGINAL DRAWINGS, DATED DEC 2009

NO.	DATE	DR	REVISION	CHK	APVD	APPROVED-BY
		J. STALLARD		R. LUKE	J. McMADE	

CH2MHILL

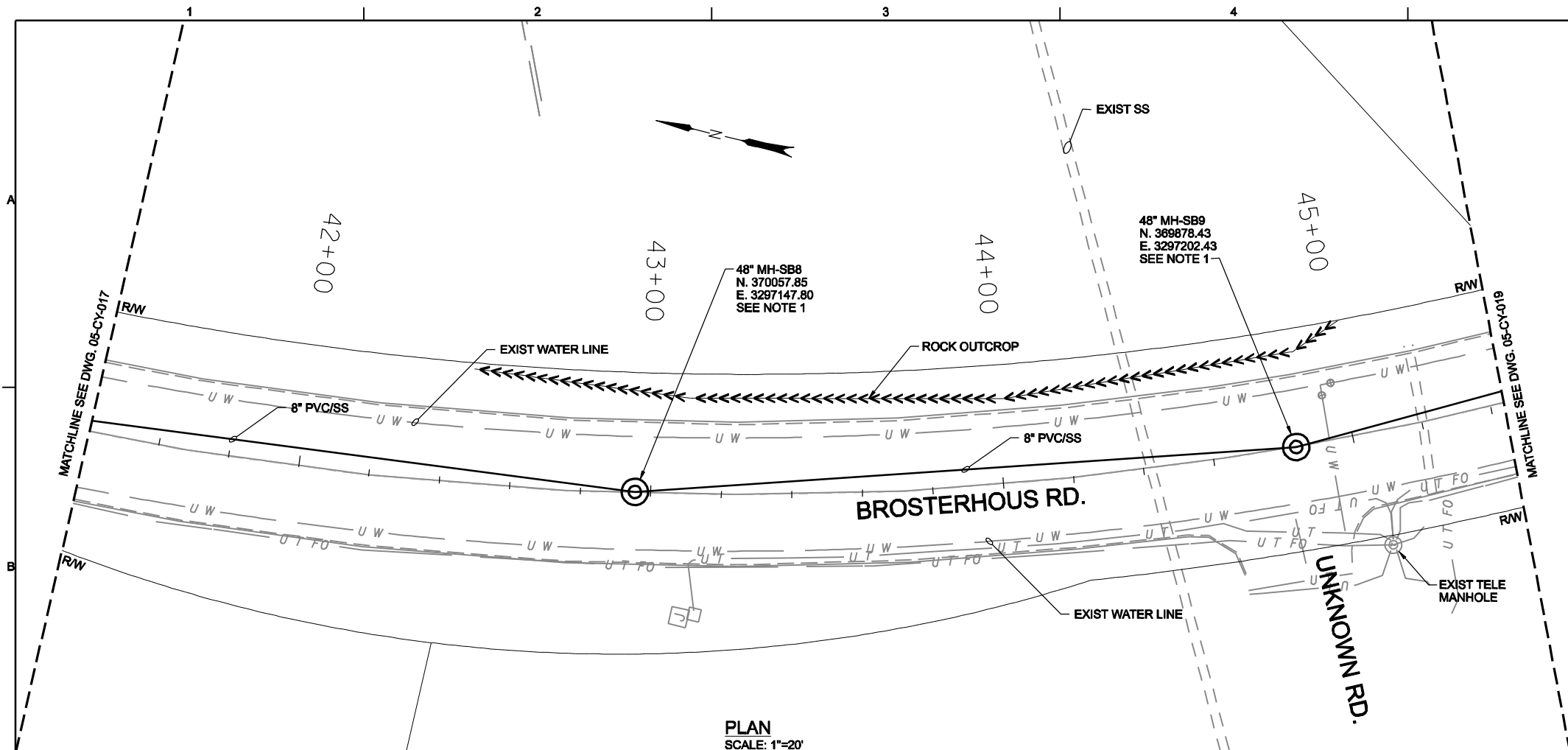
SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

CIVIL
SCHEDULE C
SOUTH BROSTERHAUS SANITARY SEWER
PLAN AND PROFILE

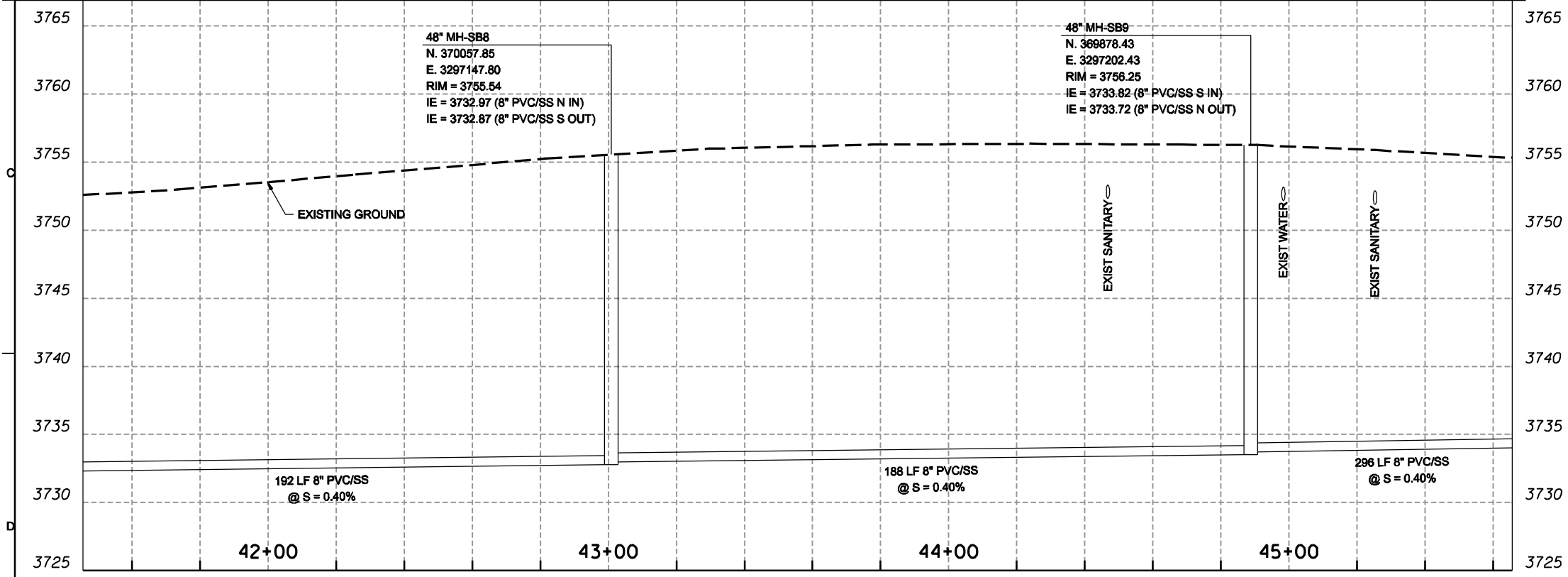
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE	MARCH 2010
PROJ	362936
DWG	05-CY-017
SHEET	28 OF 45





PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ.
1"=5' VERT.

- NOTES:
1. PRECAST MANHOLE WITH EPOXY LINER PER CITY OF BEND STANDARD SPECIFICATION 00400.

FOR SIGNATURES AND SEALS REFER TO ORIGINAL DRAWINGS, DATED DEC 2009

NO.	DATE	DR	CHK	APVD	APPROVED-BY
		J. STALLARD	R. LUKE	J. McMADE	

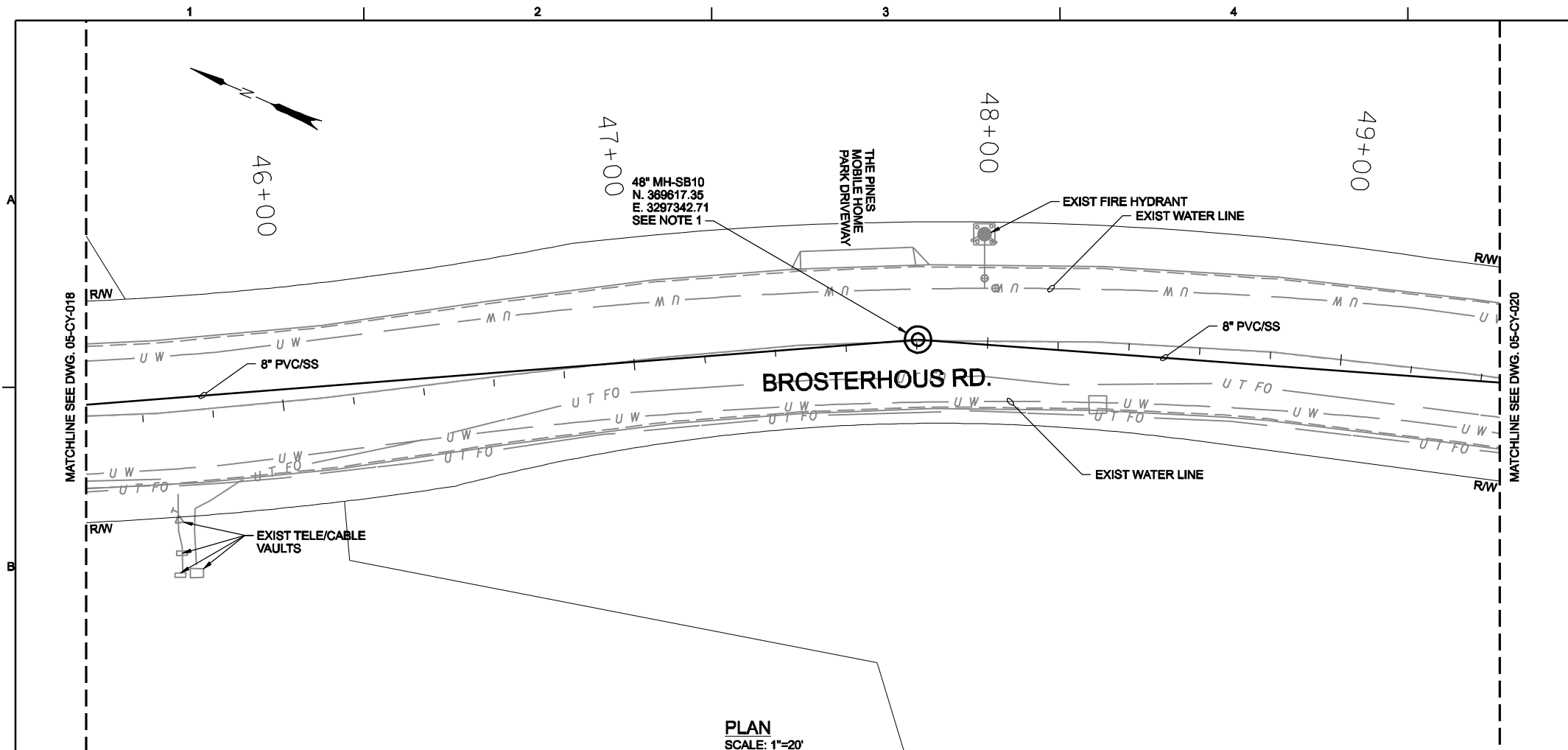
SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

CIVIL
SCHEDULE C
SOUTH BROSTERHAUS SANITARY SEWER
PLAN AND PROFILE

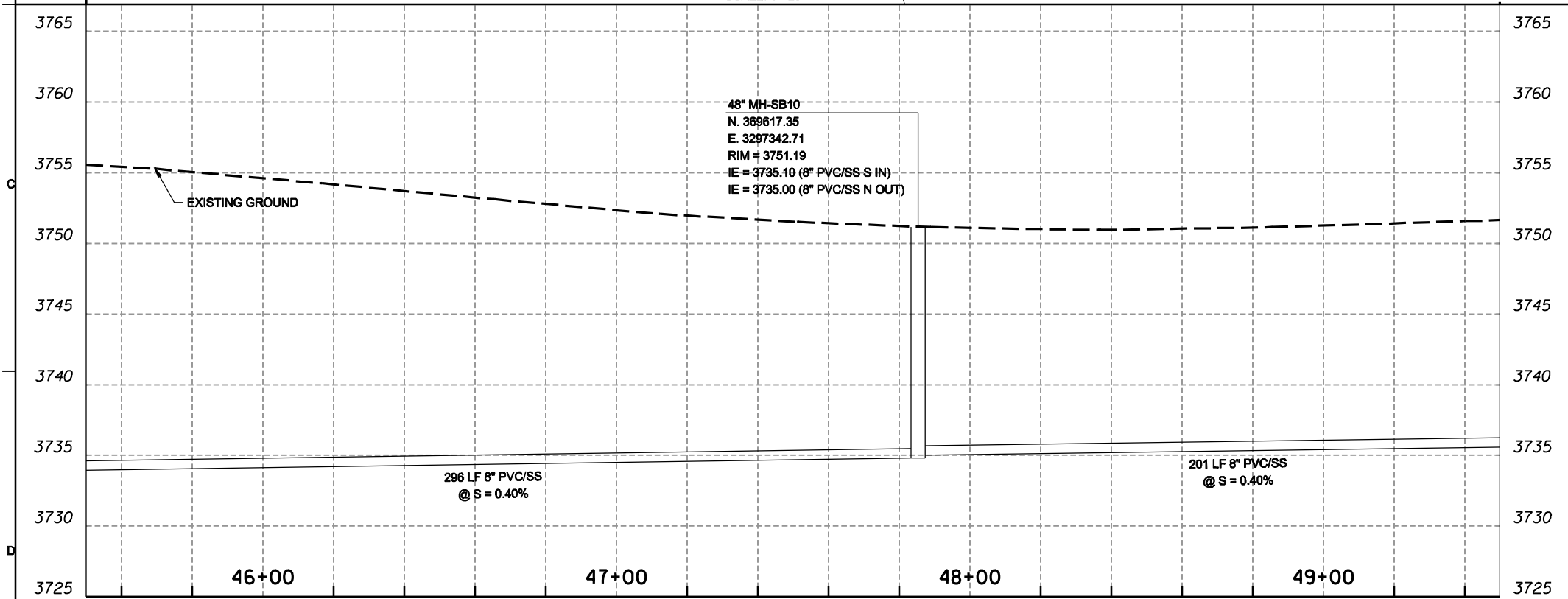
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE	MARCH 2010
PROJ	362936
DWG	05-CY-018
SHEET	29 OF 45





PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ.
1"=5' VERT.

- NOTES:
1. PRECAST MANHOLE WITH EPOXY LINER PER CITY OF BEND STANDARD SPECIFICATION 00400.

FOR SIGNATURES AND SEALS REFER TO ORIGINAL DRAWINGS, DATED DEC 2009

NO.	DATE	DR	CHK	APVD	APPROVED-BY
		J. STALLARD	R. LUKE	J. McMADE	

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CH2MHILL

CIVIL

SCHEDULE C

SOUTH BROSTERHOUS SANITARY SEWER

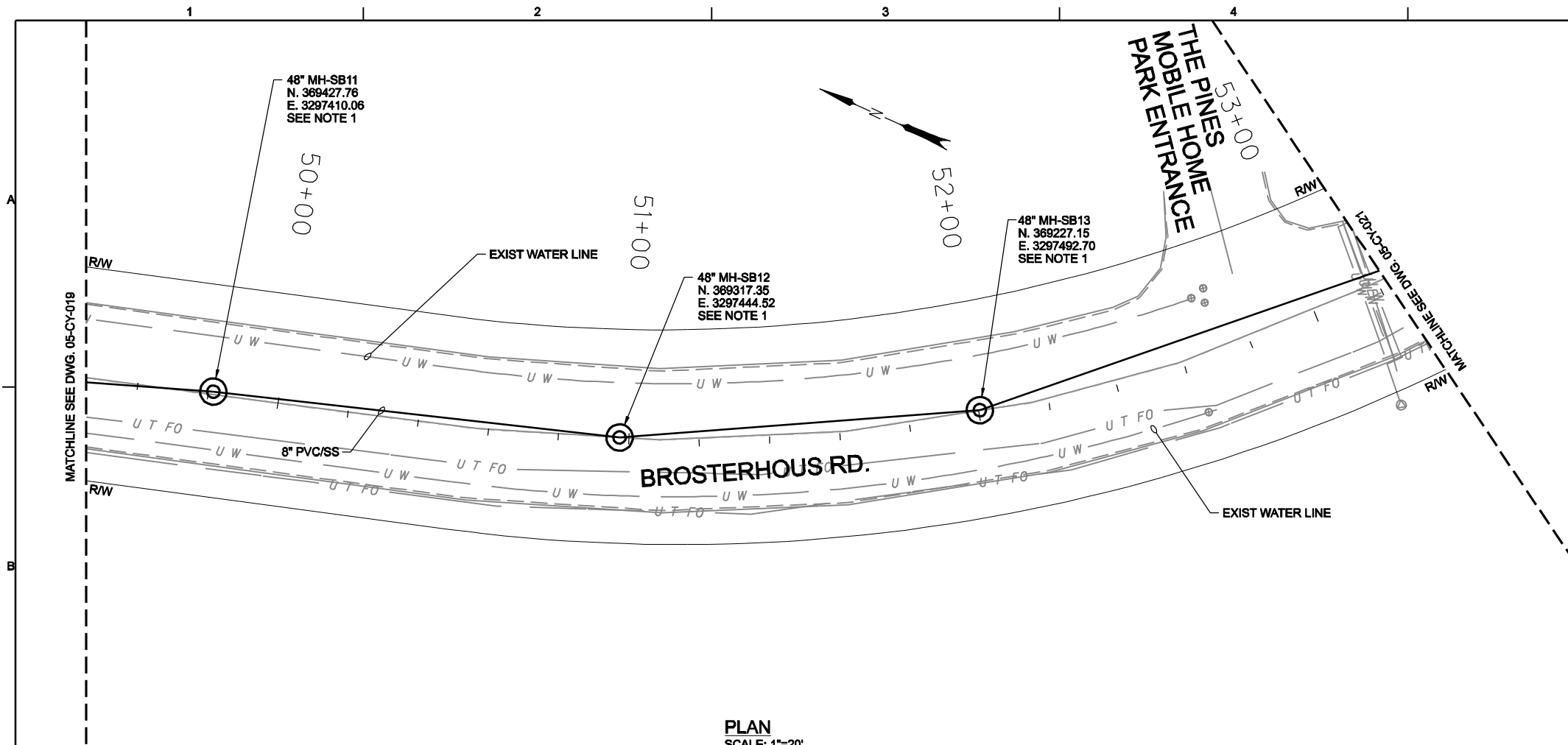
PLAN AND PROFILE

SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

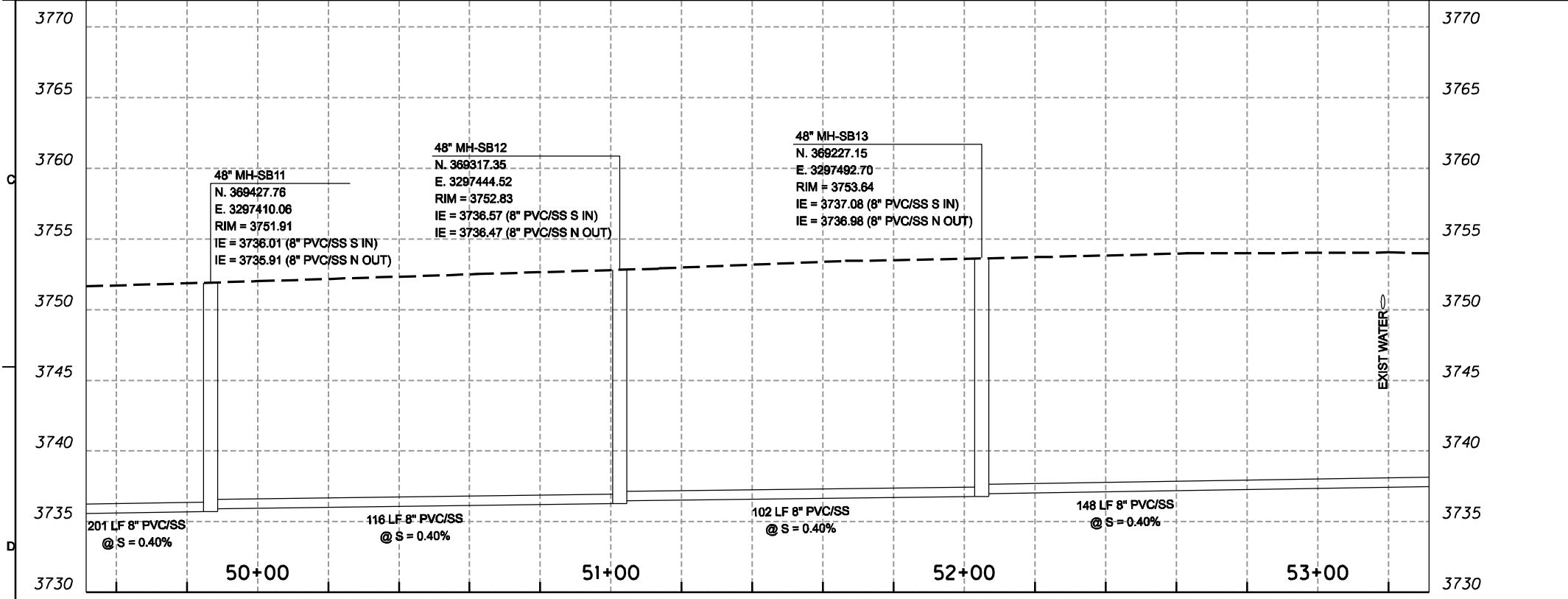


VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE	MARCH 2010
PROJ	362936
DWG	05-CY-019
SHEET	30 OF 45



PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ.
1"=5' VERT.

- NOTES:
1. PRECAST MANHOLE WITH EPOXY LINER PER CITY OF BEND STANDARD SPECIFICATION 00400.

FOR SIGNATURES AND SEALS REFER TO ORIGINAL DRAWINGS, DATED DEC 2009

NO.	DATE	DR	CHK	APVD	APPROVED-BY
		J. STALLARD	R. LUKE	J. McWADE	

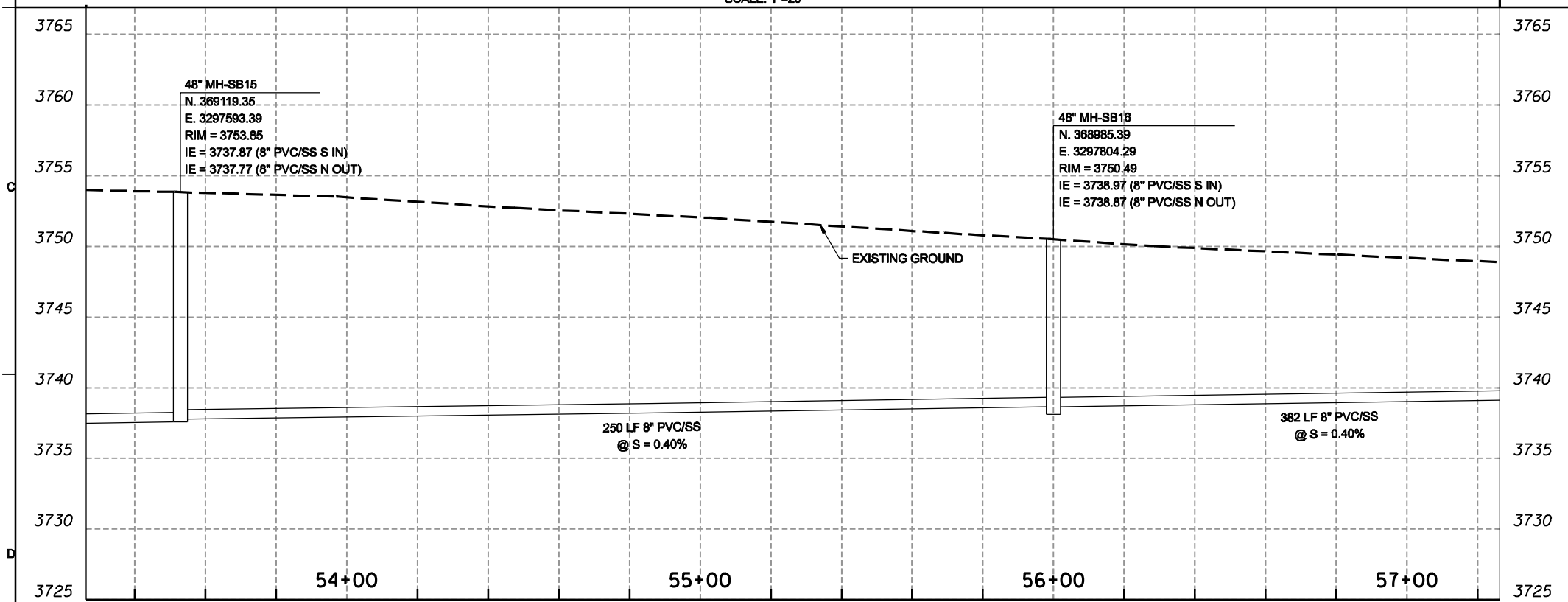
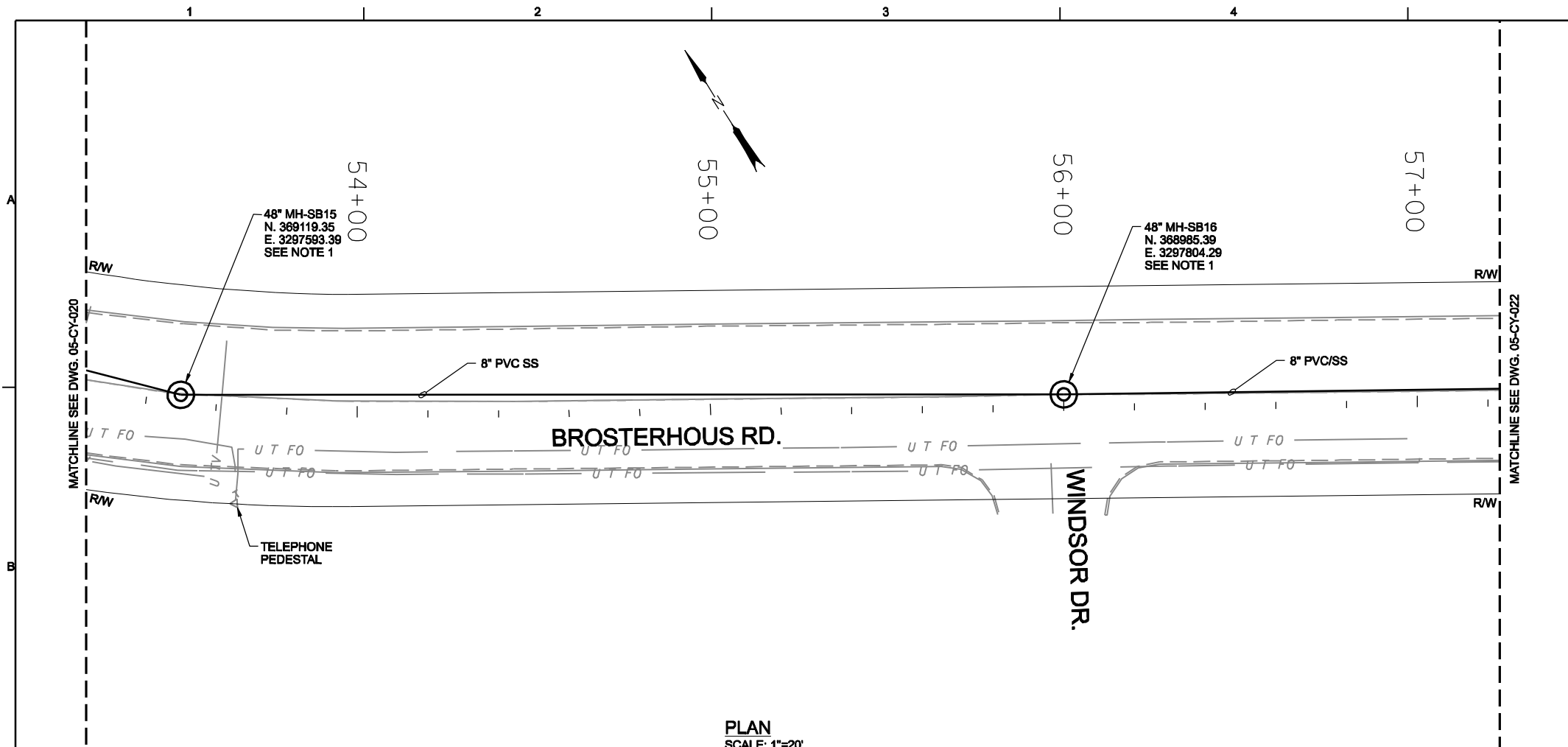
SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

CH2MHILL
CIVIL
SCHEDULE C
SOUTH BROSTERHOUS SANITARY SEWER
PLAN AND PROFILE

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE	MARCH 2010
PROJ	362936
DWG	05-CY-020
SHEET	31 OF 45





NOTES:

1. PRECAST MANHOLE WITH EPOXY LINER PER CITY OF BEND STANDARD SPECIFICATION 00400.

FOR SIGNATURES AND SEALS REFER TO ORIGINAL DRAWINGS, DATED DEC 2009

NO.	DATE	DR	CHK	APVD	APPROVED-BY
		J. STALLARD	R. LUKE	J. McMADE	

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CH2MHILL

CIVIL

SCHEDULE C

SOUTH BROSTERHAUS SANITARY SEWER

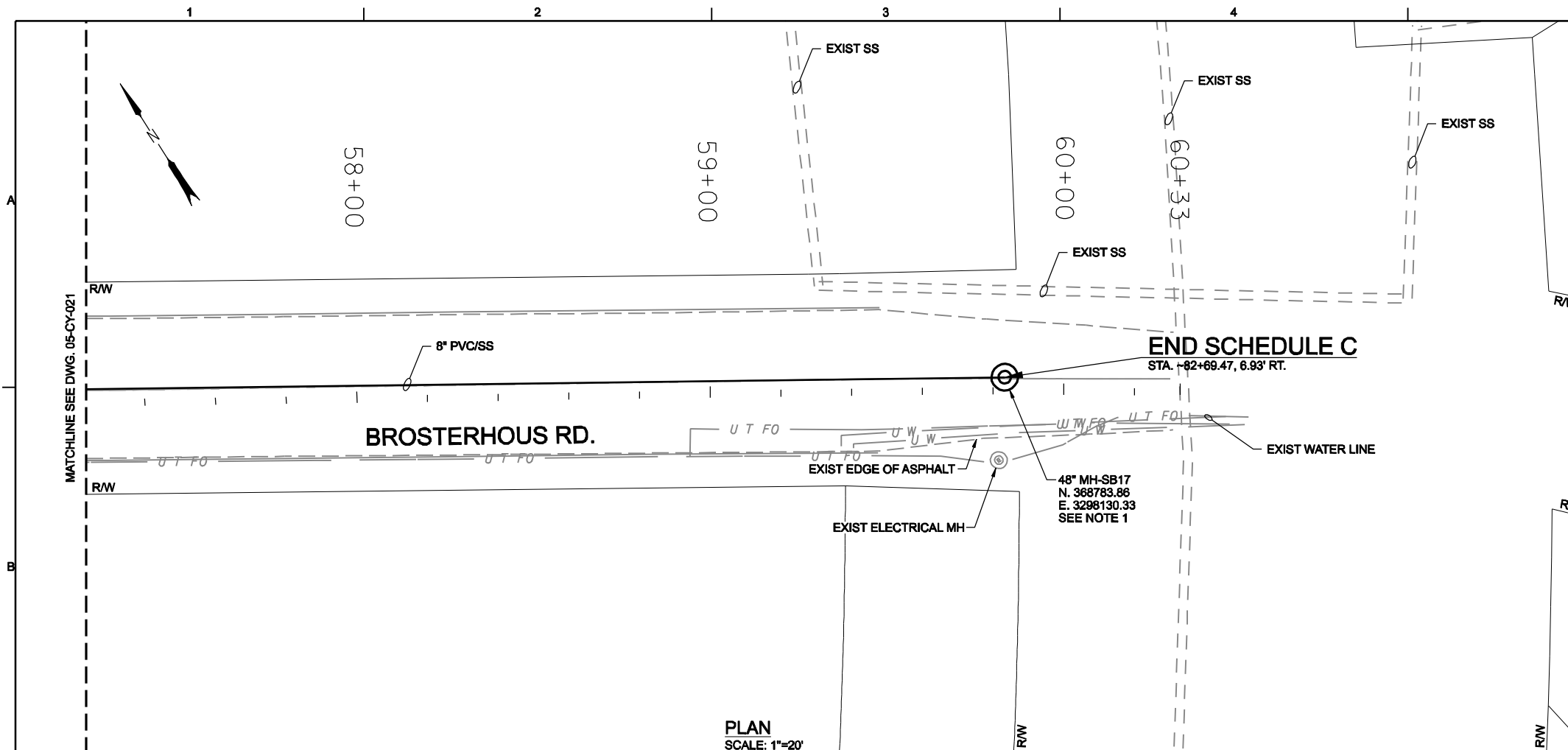
PLAN AND PROFILE

SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

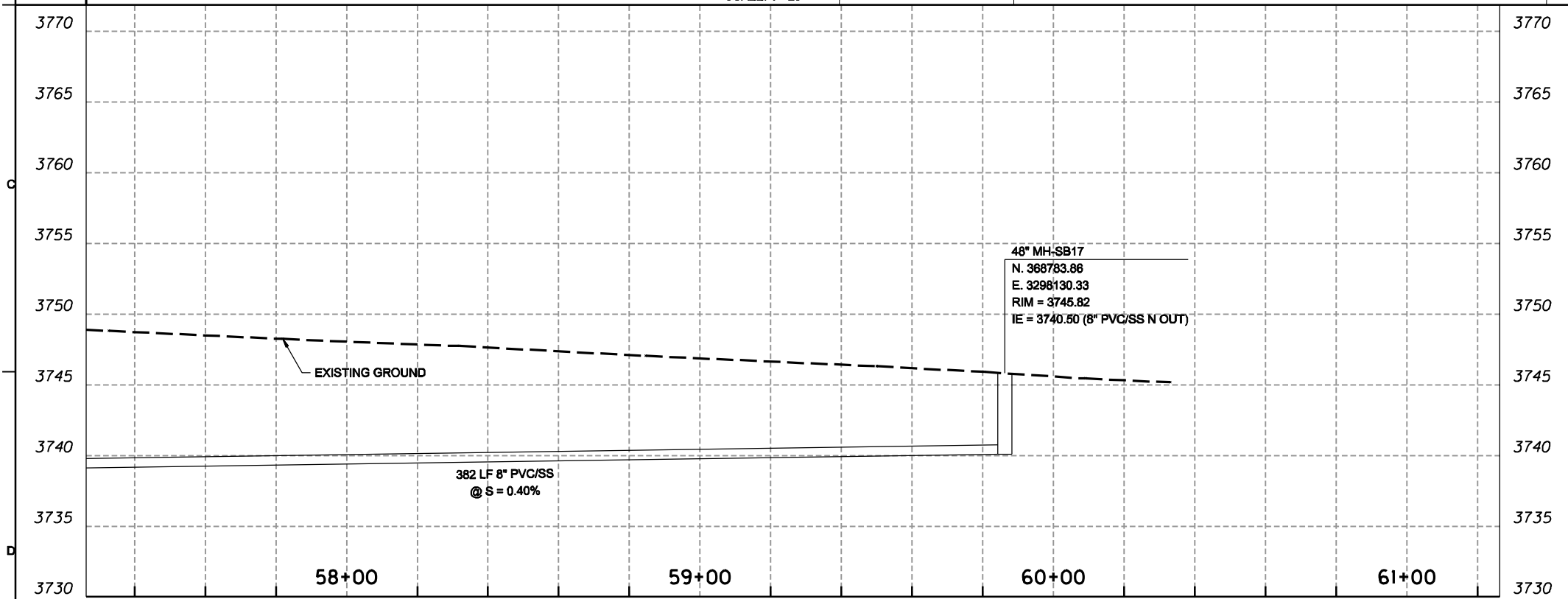
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE	MARCH 2010
PROJ	362936
DWG	05-CY-021
SHEET	32 OF 45





PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ.
1"=5' VERT.

- NOTES:**
1. PRECAST MANHOLE WITH EPOXY LINER PER CITY OF BEND STANDARD SPECIFICATION 00400.
 2. BIDDERS SHALL REVIEW ACCESS AND OVERHEAD CONFLICTS INCLUDING RAILROAD TRESTLE.
 3. THE END OF SCHEDULE C SHALL TERMINATE JUST PRIOR TO ENCROACHMENT ON THE BNSF EXISTING RAIL ROAD R-O-W. WITH THIS TERMINATION, IT IS EXPECTED THAT NO BNSF PERMITS WILL BE REQUIRED TO COMPLETE SCHEDULE C.

FOR SIGNATURES AND SEALS REFER TO ORIGINAL DRAWINGS, DATED DEC 2009

NO.	DATE	BY	APPROVED-BY
1	1/19/2010	R. LUKE	J. McMADE
DGN		DR	APVD
NO.		REVISION	CHK
1		ADDENDUM #1	RDL
			JSS

CH2MHILL

SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

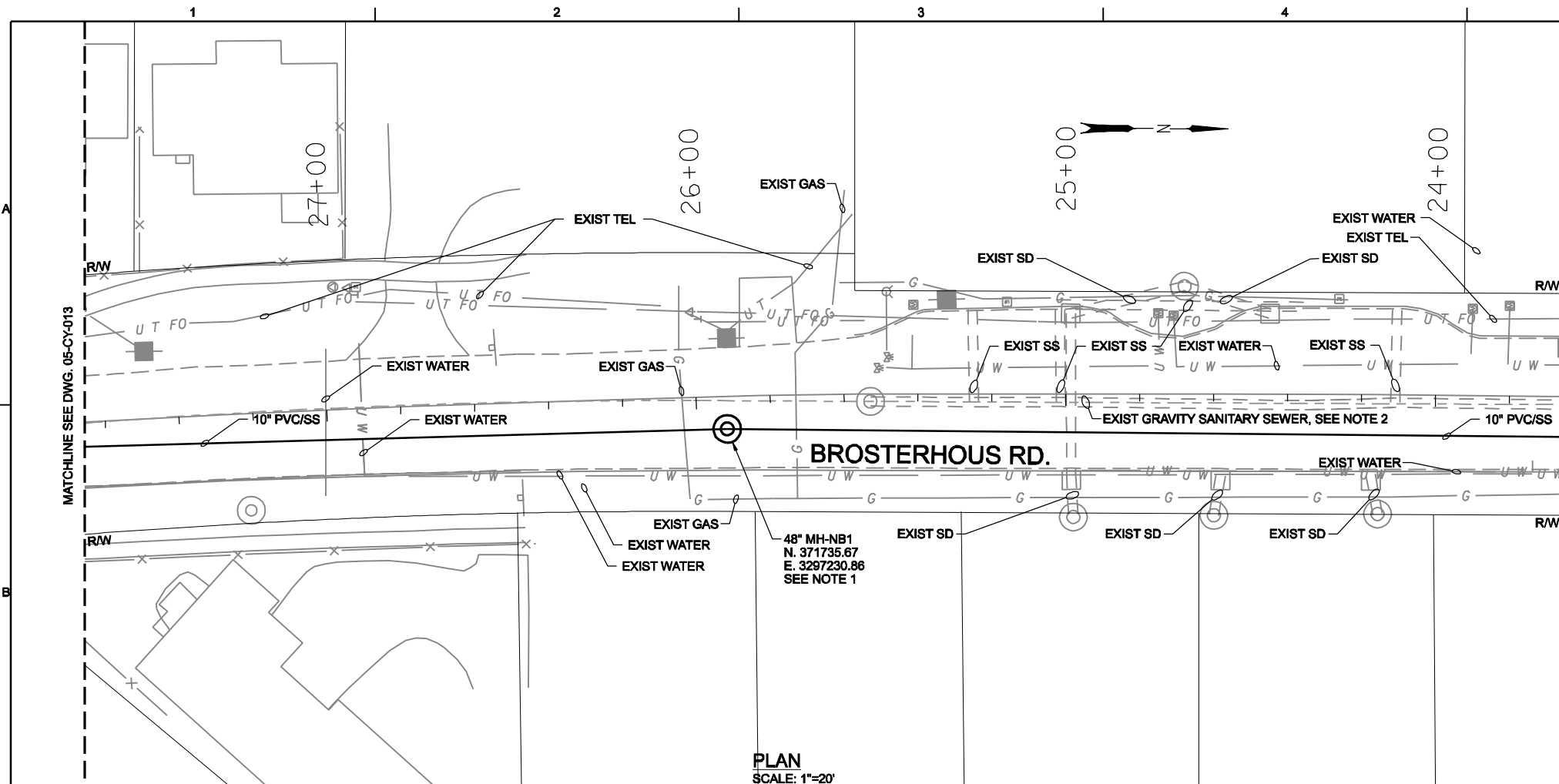
CIVIL
SCHEDULE C
SOUTH BROSTERHAUS SANITARY SEWER
PLAN AND PROFILE

VERIFY SCALE
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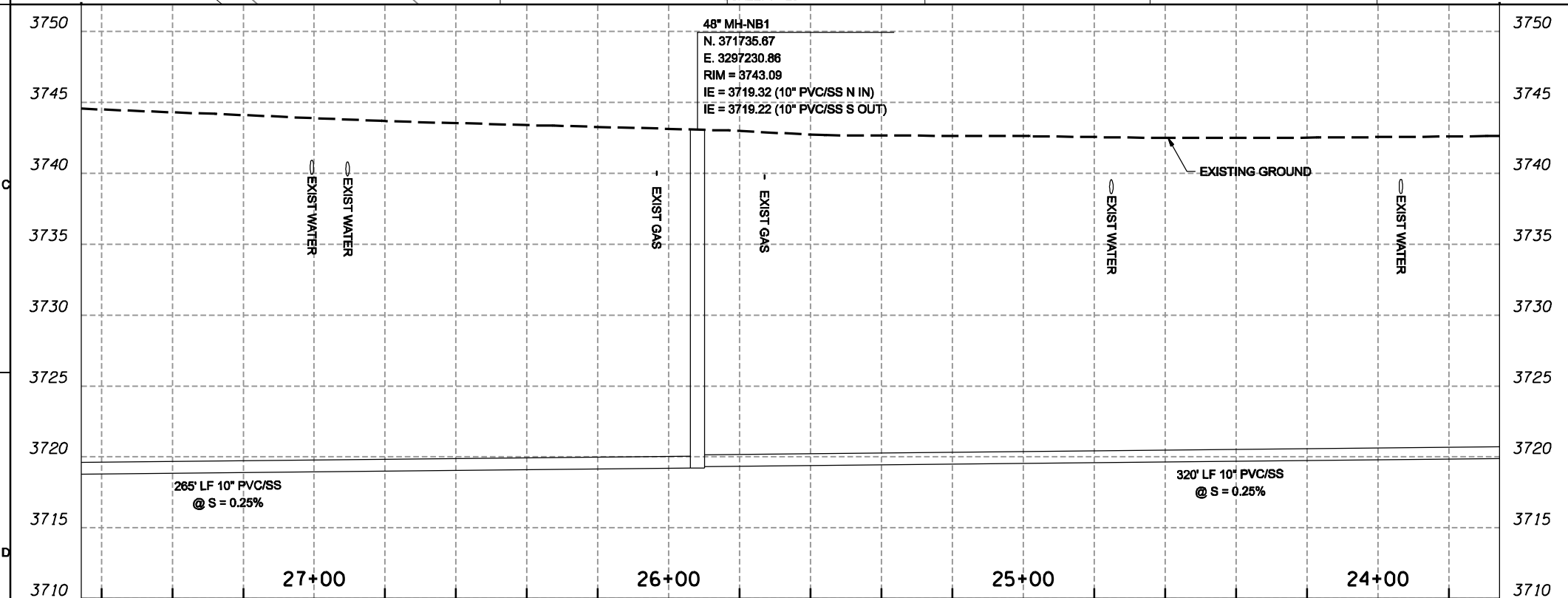
DATE	MARCH 2010
PROJ	362936
DWG	05-CY-022
SHEET	33 OF 45



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PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ.
1"=5' VERT.

NOTES:

1. PRECAST MANHOLE WITH EPOXY LINER PER CITY OF BEND STANDARD SPECIFICATION 00400.
2. CONTRACTOR TO PROVIDE PLAN TO MAINTAIN EXISTING GRAVITY SEWER SERVICE TO LOTS SERVED BY THIS SEWER AND RECONSTRUCT BACK TO ORIGINAL LOCATION IF DAMAGED DURING CONSTRUCTION. PER CITY OF BEND STANDARDS AND SPECIFICATIONS.

FOR SIGNATURES AND SEALS REFER TO ORIGINAL DRAWINGS, DATED DEC 2009

NO.	DATE	DR	CHK	APVD	APPROVED-BY
		J. STALLARD	R. LUKE	J. McMADE	APPROVED

SOUTH EAST INTERCEPTOR
 MURPHY ROAD SEGMENT
 CITY OF BEND, OREGON

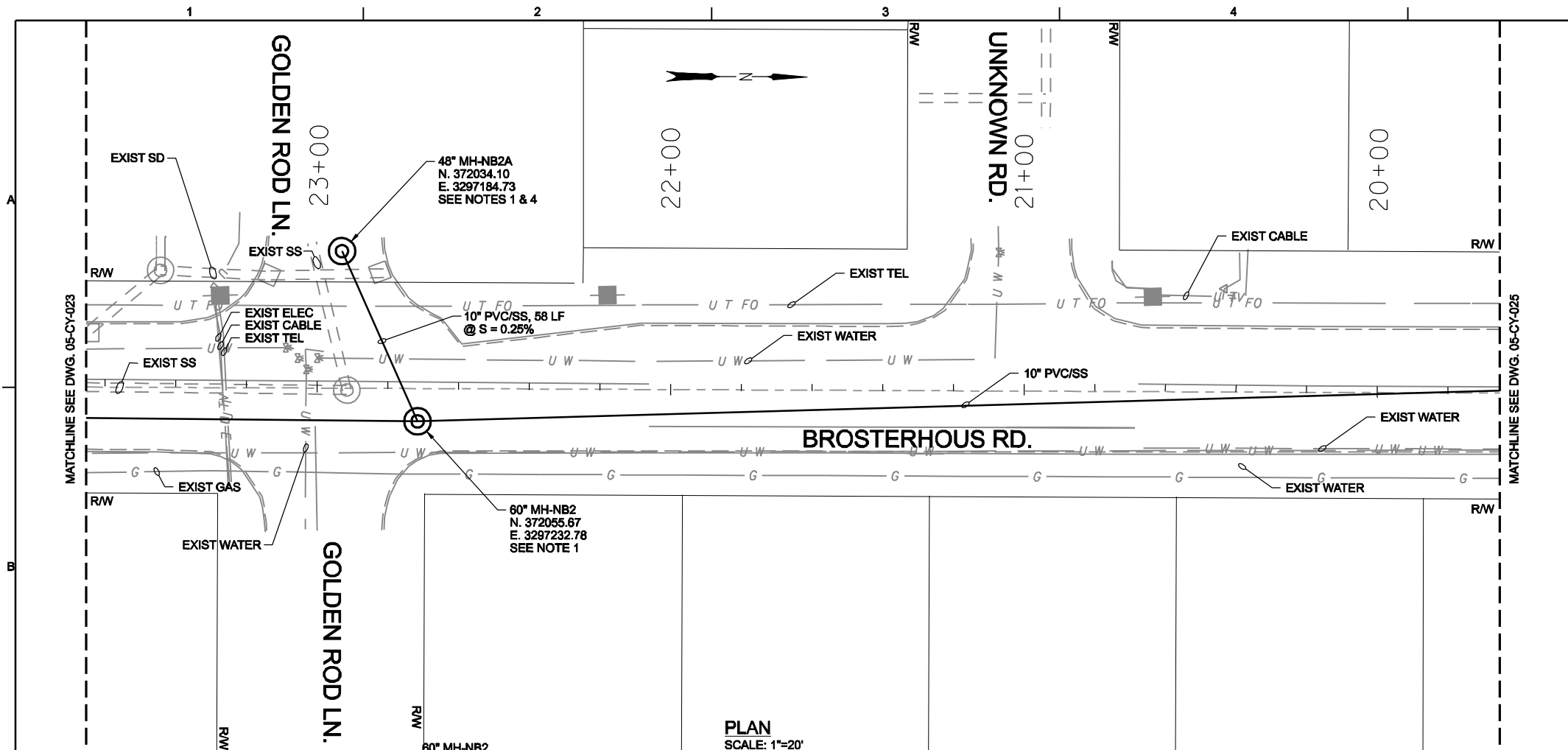
CH2MHILL
 CIVIL
 SCHEDULE D
 NORTH BROSTERHOUS SANITARY SEWER
 PLAN AND PROFILE



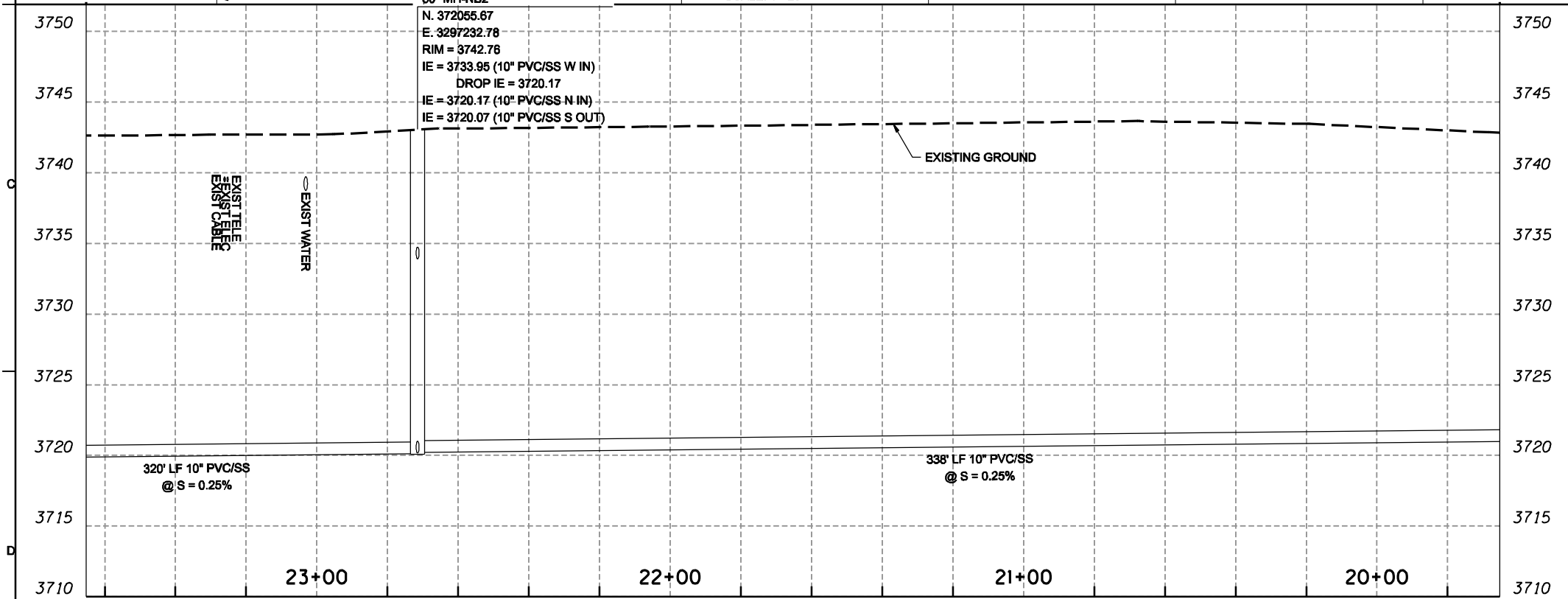
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DATE	MARCH 2010
PROJ	362936
DWG	05-CY-023
SHEET	34 OF 45

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PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ.
1"=5' VERT.

- NOTES:**
1. PRECAST MANHOLE WITH EPOXY LINER PER CITY OF BEND STANDARD SPECIFICATION 00400.
 2. CONNECT 10" W SEWER FROM MH-NB2 TO MH 71-33-3 IN GOLDEN ROD LN. FIELD VERIFY INVERT OF MH 71-33-3 AND MAINTAIN MINIMUM SLOPE FOR 10" (0.25%) SANITARY SEWER FOR CONNECTION TO BROSTERHAUS SEWER. VERIFY INVERTS WITH ENGINEER PRIOR TO CONSTRUCTING. APPROX INVERT OF MH 71-33-3 IS 3734.88
 3. ALL EXISTING SANITARY SEWER LINES ARE PRESSURIZED.
 4. 48" MH-NB2A
RIM = 3742.68
IE = 3734.08 (10" PVC/SS E OUT)

FOR
SIGNATURES
AND SEALS REFER
TO ORIGINAL
DRAWINGS, DATED
DEC 2009

NO.	DATE	DR	CHK	APVD	APPROVED-BY
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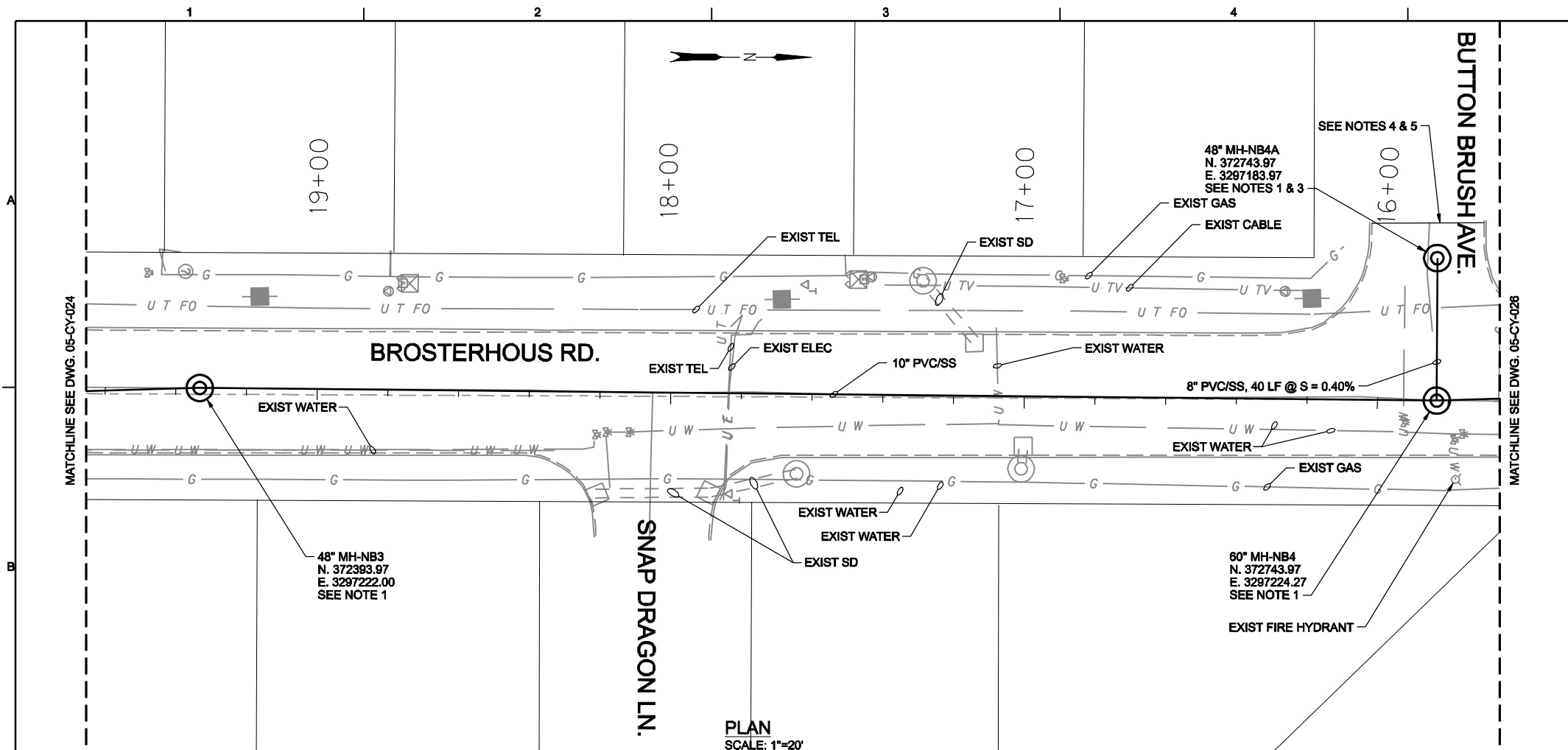
CIVIL
SCHEDULE D
NORTH BROSTERHAUS SANITARY SEWER
PLAN AND PROFILE

SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

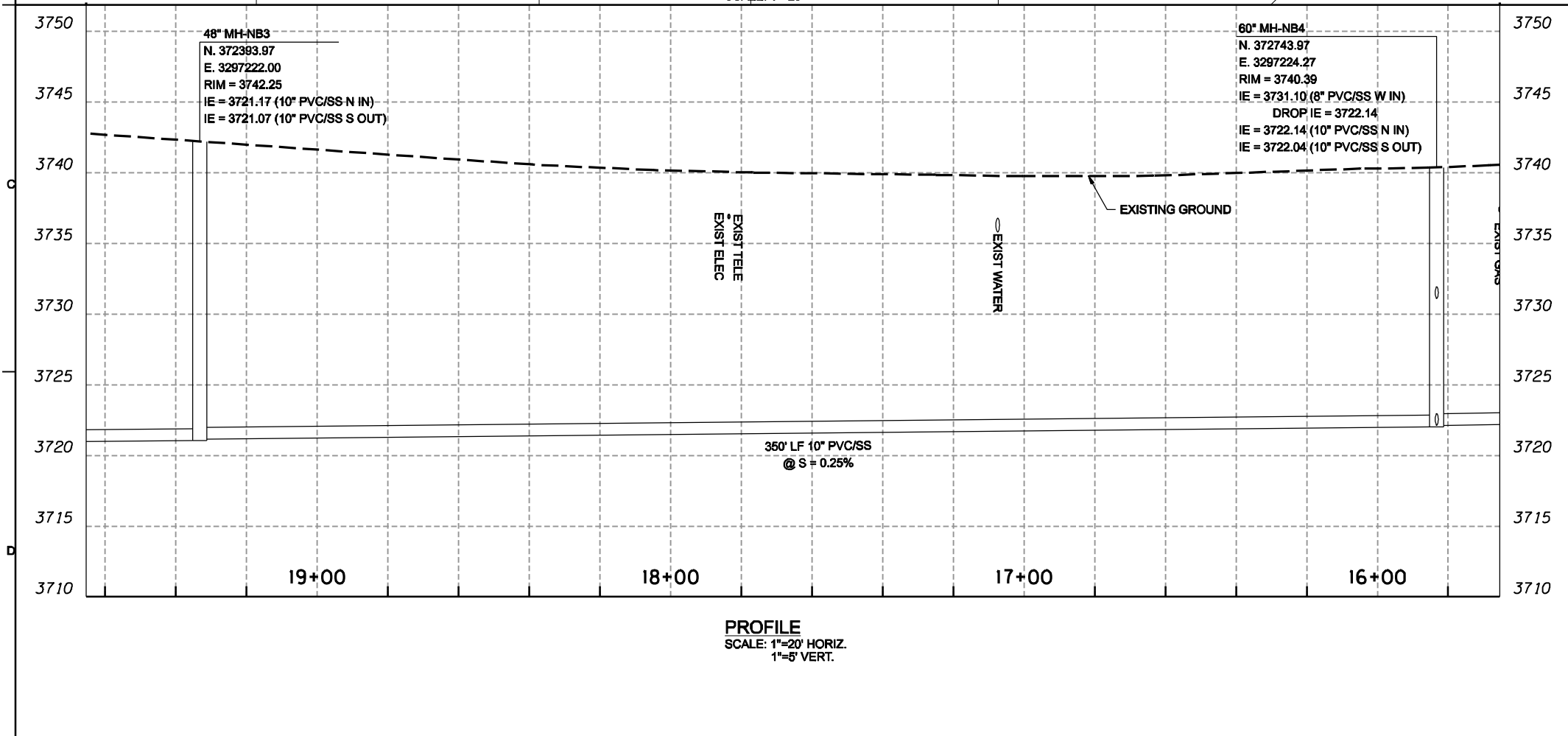
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DATE	MARCH 2010
PROJ	362936
DWG	05-CY-024
SHEET	35 OF 45



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- NOTES:
1. PRECAST MANHOLE WITH EPOXY LINER PER CITY OF BEND STANDARD SPECIFICATION 00400.
 2. ALL EXISTING SANITARY SEWER LINES ARE PRESSURIZED.
 3. 48" MH-NB4A
N. 372743.97
E. 3297183.97
SEE NOTES 1 & 3
 4. PAVING PAY LIMITS 10' BEYOND PROPOSED MANHOLE.
 5. BUTTON BRUSH AVE. IS SCHOOL BUS ROUTE. MAINTAIN ACCESS TO BUTTON BRUSH AT ALL TIMES DURING CONSTRUCTION. ANY REQUIRED CLOSURES OF BUTTON BRUSH SHALL BE COORDINATED WITH JEWELL SCHOOL.



FOR SIGNATURES AND SEALS REFER TO ORIGINAL DRAWINGS, DATED DEC 2009

NO.	DATE	DR	CHK	APVD	APPROVED-BY
		J. STALLARD	R. LUKE	J. McMADE	

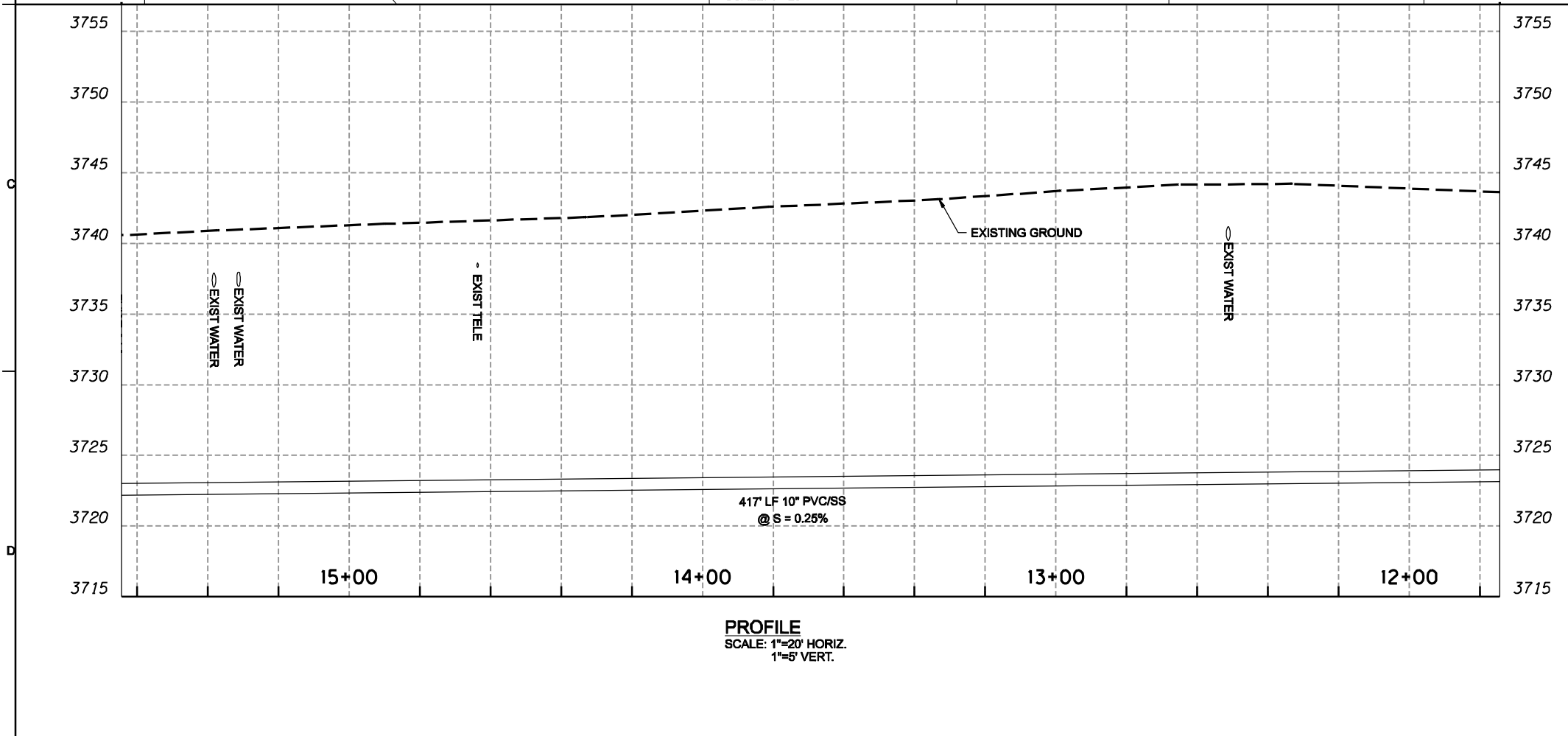
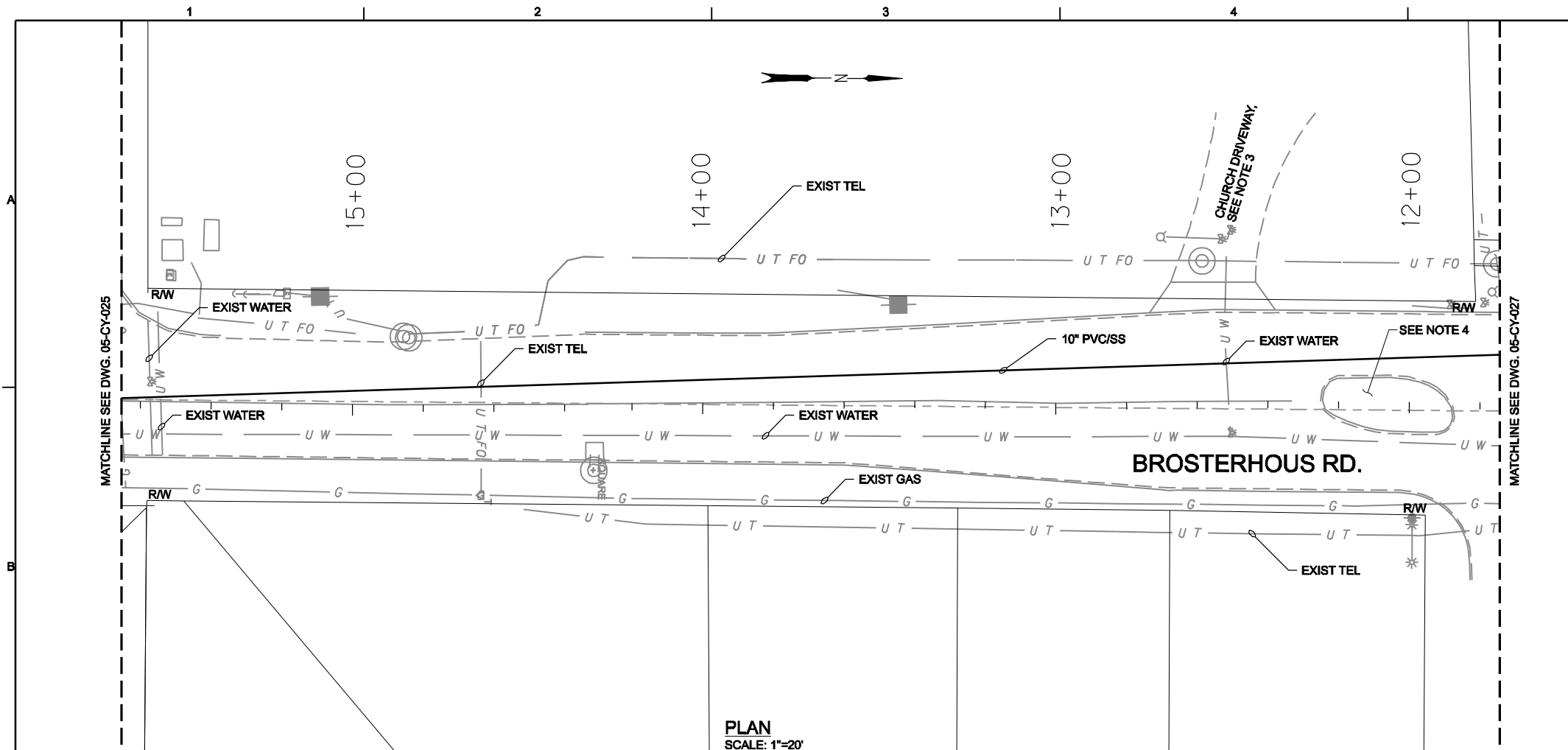
SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

CIVIL
SCHEDULE D
NORTH BROSTERHOUS SANITARY SEWER
PLAN AND PROFILE

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE	MARCH 2010
PROJ	362936
DWG	05-CY-025
SHEET	36 OF 45





NOTES:

1. PRECAST MANHOLE WITH EPOXY LINER PER CITY OF BEND STANDARD SPECIFICATION 00400.
2. ALL EXISTING SANITARY SEWER LINES ARE PRESSURIZED.
3. BUSINESS ACCESS, KEEP OPEN AT ALL TIMES OR PROVIDE ANOTHER MEANS OF ACCESS.
4. TRAFFIC ISLAND TO BE AS BUILT PRIOR TO CONSTRUCTION. IF DAMAGED DURING CONSTRUCTION REPLACE TO ORIGINAL AS BUILT CONDITIONS. PER CITY OF BEND STANDARDS AND SPECIFICATIONS.
5. WHERE A TRAFFIC ISLAND EXISTS WITHIN THE BROSTERHOUS RD. R-O-W, CURB TO CURB REPLACEMENT AS IT PERTAINS TO CITY OF BEND DETAIL R-1 SHALL BE IDENTIFIED AS INTERIOR TRAFFIC ISLAND CURB TO OUTSIDE ROAD CURB OF THE DISTURBED SECTION OF BROSTERHOUS RD.

FOR SIGNATURES AND SEALS REFER TO ORIGINAL DRAWINGS, DATED DEC 2009

NO.	DATE	BY	APPROVED-BY
1	01/19/2010	R. LUKE	J. McMADE
DGN		DR	APVD
NO.		REVISION	APVD
1		ADDENDUM #1	RDL
		CHK	JSS

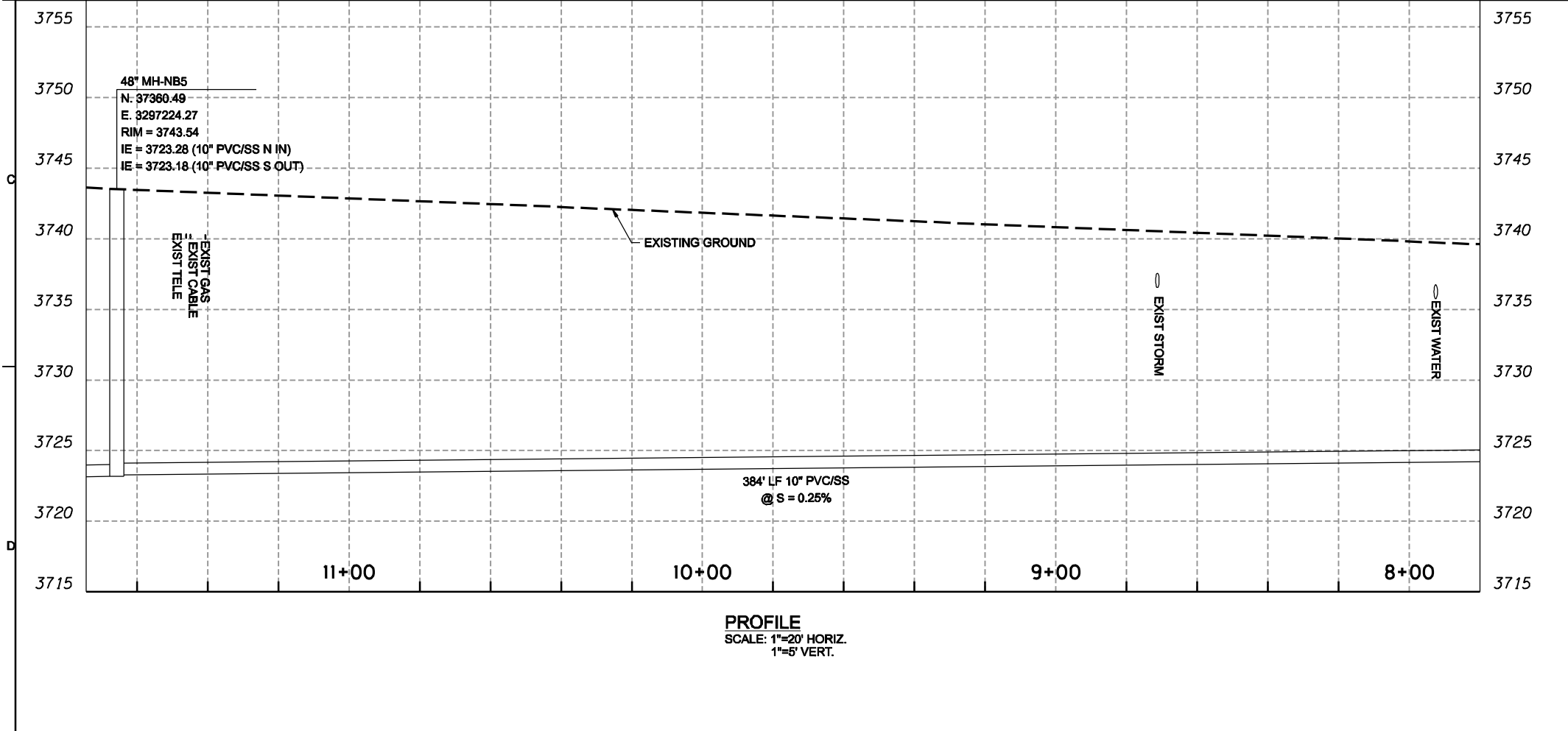
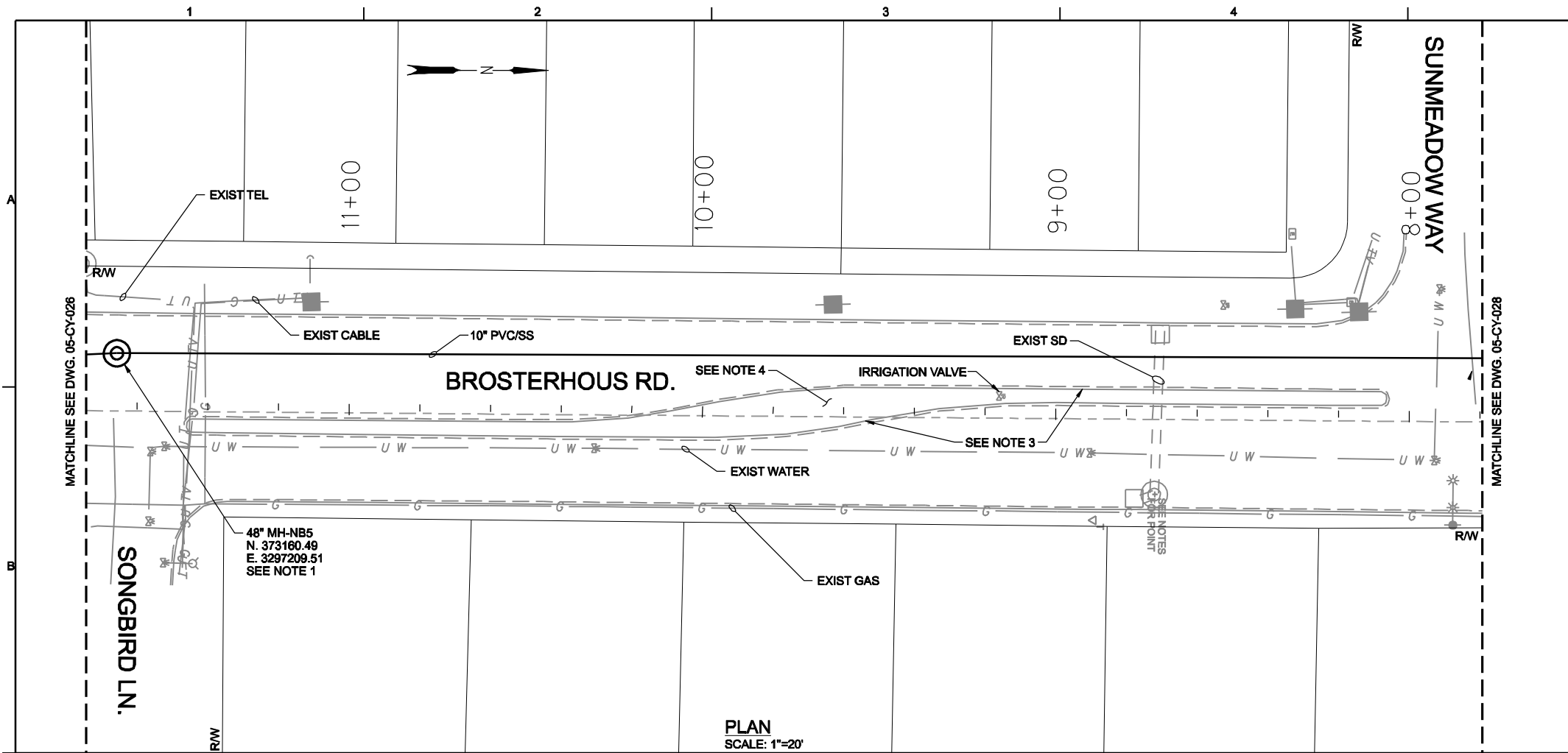
CH2MHILL
SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

CIVIL
SCHEDULE D
NORTH BROSTERHOUS SANITARY SEWER
PLAN AND PROFILE

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1'

DATE MARCH 2010
PROJ 362936
DWG 05-CY-026
SHEET 37 OF 45





- NOTES:**
1. PRECAST MANHOLE WITH EPOXY LINER PER CITY OF BEND STANDARD SPECIFICATION 00400.
 2. ALL EXISTING SANITARY SEWER LINES ARE PRESSURIZED.
 3. REPLACE ALL DAMAGED MEDIAN, CURB, AND LANDSCAPING TO MATCH EXISTING.
 4. TRAFFIC ISLAND TO BE AS BUILT PRIOR TO CONSTRUCTION. IF DAMAGED DURING CONSTRUCTION REPLACE TO ORIGINAL AS BUILT CONDITIONS.
 5. WHERE A TRAFFIC ISLAND EXISTS WITHIN THE BROSTERHAUS RD. R-O-W, CURB TO CURB REPLACEMENT AS IT PERTAINS TO CITY OF BEND DETAIL R-1 SHALL BE IDENTIFIED AS INTERIOR TRAFFIC ISLAND CURB TO OUTSIDE ROAD CURB OF THE DISTURBED SECTION OF BROSTERHAUS RD.

FOR SIGNATURES AND SEALS REFER TO ORIGINAL DRAWINGS, DATED DEC 2009

NO.	DATE	DR	CHK	APVD	APPROVED-BY
1	1/19/2010	J. STALLARD	R. LUKE	J. McMADE	J. McMADE
ADDENDUM #1		REVISION	BY	APVD	

CH2MHILL

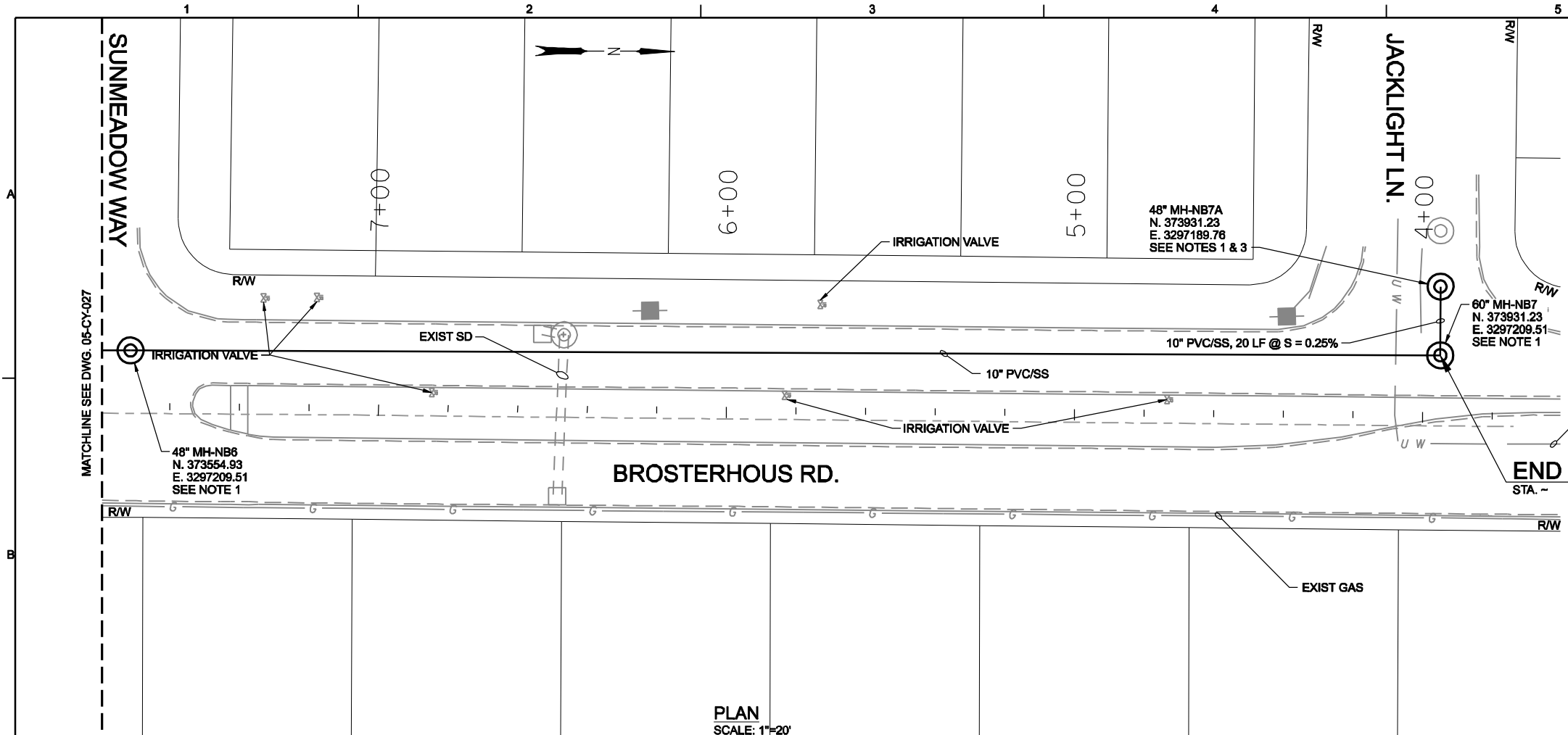
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SCHEDULE D
NORTH BROSTERHAUS SANITARY SEWER
PLAN AND PROFILE

SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	MARCH 2010
PROJ	362936
DWG	05-CY-027
SHEET	38 OF 45

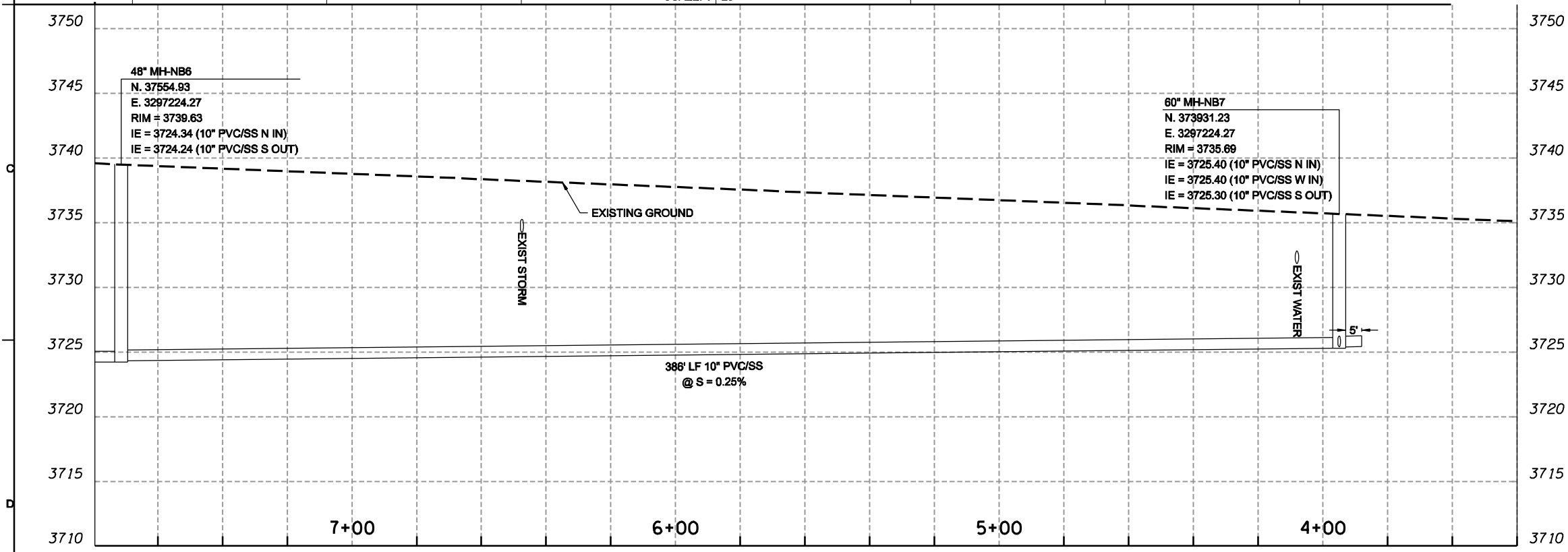


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- NOTES:
1. PRECAST MANHOLE WITH EPOXY LINER PER CITY OF BEND STANDARD SPECIFICATION 00400.
 2. ALL EXISTING SANITARY SEWER LINES ARE PRESSURIZED.
 3. 48" MH-NB7A
RIM = 3734.52
IE = 3725.45 (10" PVC/SS E OUT)
 4. TRAFFIC ISLAND TO BE AS BUILT PRIOR TO CONSTRUCTION. IF DAMAGED DURING CONSTRUCTION, REPLACE TO ORIGINAL AS BUILT CONDITIONS.
 5. WHERE A TRAFFIC ISLAND EXISTS WITHIN THE BROSTERHAUS RD. R-O-W, CURB TO CURB REPLACEMENT AS IT PERTAINS TO CITY OF BEND DETAIL R-1 SHALL BE IDENTIFIED AS INTERIOR TRAFFIC ISLAND CURB TO OUTSIDE ROAD CURB OF THE DISTURBED SECTION OF BROSTERHAUS RD.

PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ.
1"=5' VERT.

FOR
SIGNATURES
AND SEALS REFER
TO ORIGINAL
DRAWINGS, DATED
DEC 2009

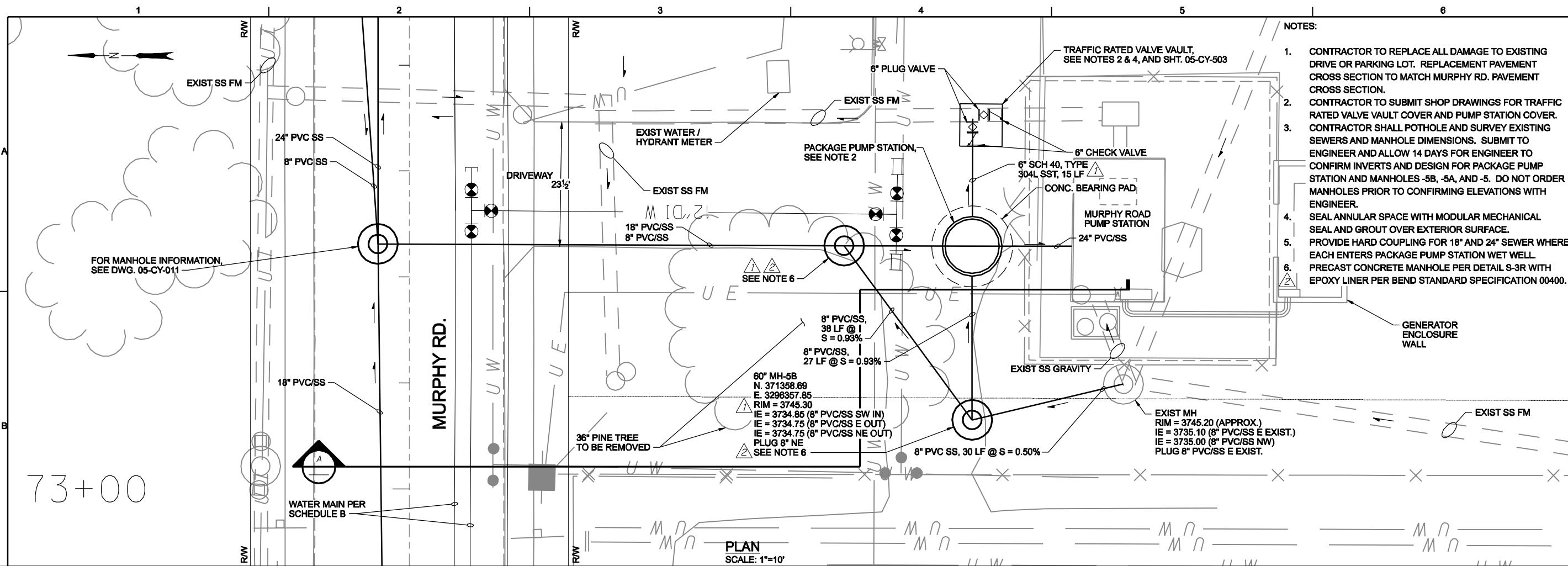
NO.	DATE	DR	CHK	APVD	APPROVED-BY
1	1/19/2010	J. STALLARD	R. LUKE	J. McMADE	J. McMADE
ADDITION #1		REVISION			
NO.		DATE			

CH2MHILL
CIVIL
SCHEDULE D
NORTH BROSTERHAUS SANITARY SEWER
PLAN AND PROFILE

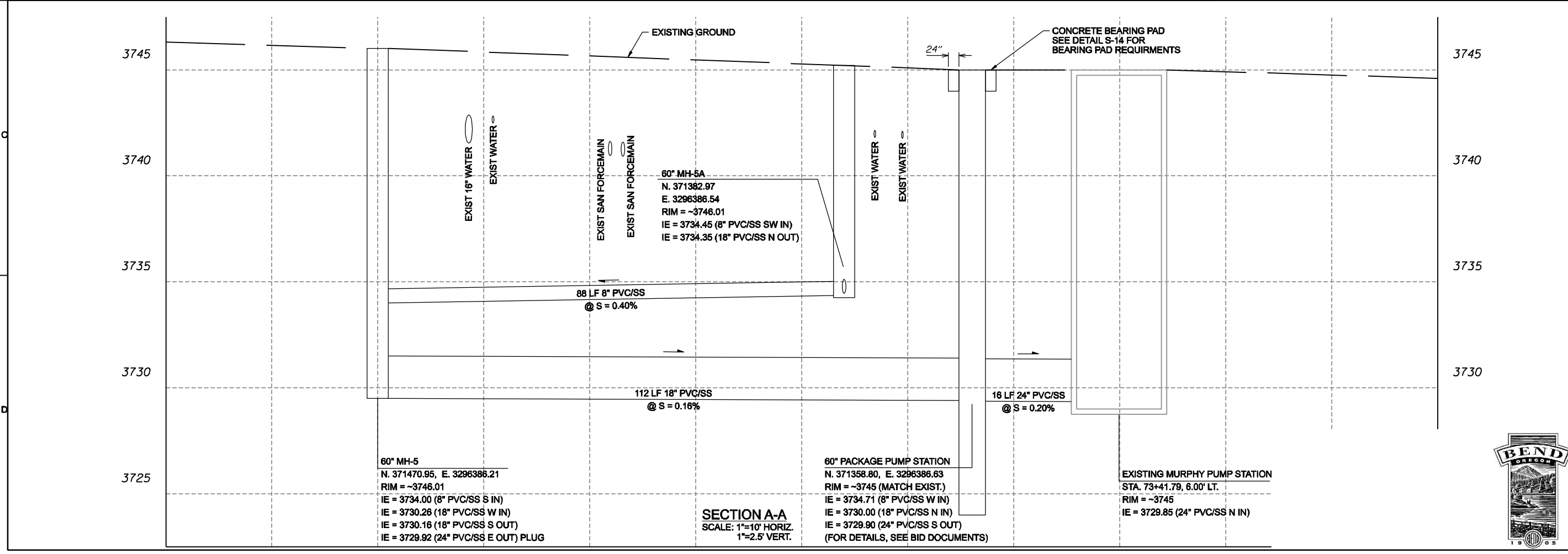
SOUTHEAST INTERCEPTOR MURPHY ROAD SEGMENT CITY OF BEND, OREGON	
VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	MARCH 2010
PROJ	362936
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- NOTES:
1. CONTRACTOR TO REPLACE ALL DAMAGE TO EXISTING DRIVE OR PARKING LOT. REPLACEMENT PAVEMENT CROSS SECTION TO MATCH MURPHY RD. PAVEMENT CROSS SECTION.
 2. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR TRAFFIC RATED VALVE VAULT COVER AND PUMP STATION COVER. CONTRACTOR SHALL POTHOLE AND SURVEY EXISTING SEWERS AND MANHOLE DIMENSIONS. SUBMIT TO ENGINEER AND ALLOW 14 DAYS FOR ENGINEER TO CONFIRM INVERTS AND DESIGN FOR PACKAGE PUMP STATION AND MANHOLES -5B, -5A, AND -5. DO NOT ORDER MANHOLES PRIOR TO CONFIRMING ELEVATIONS WITH ENGINEER.
 3. SEAL ANNULAR SPACE WITH MODULAR MECHANICAL SEAL AND GROUT OVER EXTERIOR SURFACE.
 4. PROVIDE HARD COUPLING FOR 18" AND 24" SEWER WHERE EACH ENTERS PACKAGE PUMP STATION WET WELL.
 5. PRECAST CONCRETE MANHOLE PER DETAIL S-3R WITH EPOXY LINER PER BEND STANDARD SPECIFICATION 00400.



FOR SIGNATURES AND SEALS REFER TO ORIGINAL DRAWINGS, DATED DEC 2009

NO.	DATE	REVISION	CHK	APVD	APPROVED-BY
2	1/22/2010		JSS		J. McMADE
1	1/19/2010		JSS		R. LUKE
					J. STALLARD

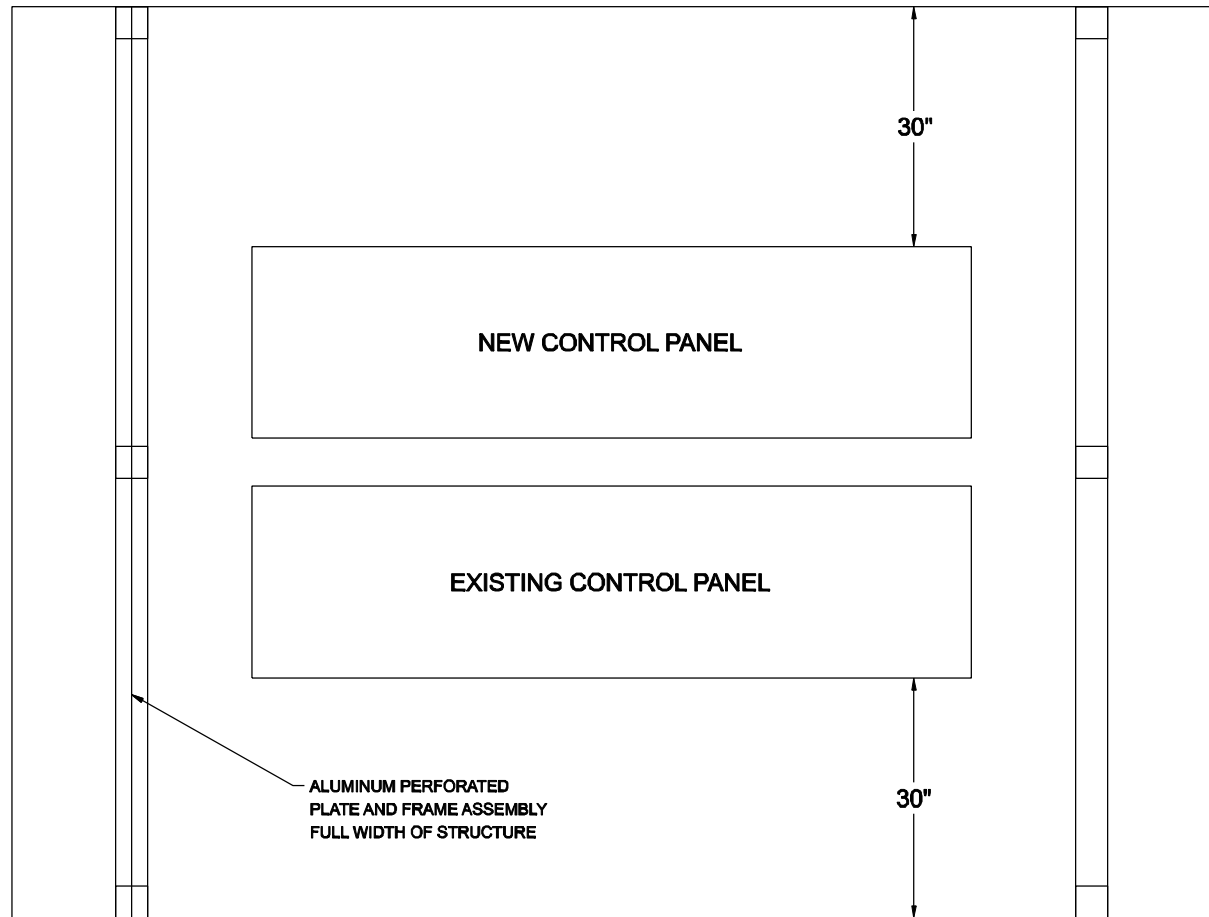
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SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

MURPHY ROAD PUMP STATION CONNECTION	
VERIFY SCALE	BAR IS ONE INCH ON ORIGINAL DRAWING.
DATE	MARCH 2010
PROJ	362936
DWG	05-CY-501
SHEET	40 OF 45

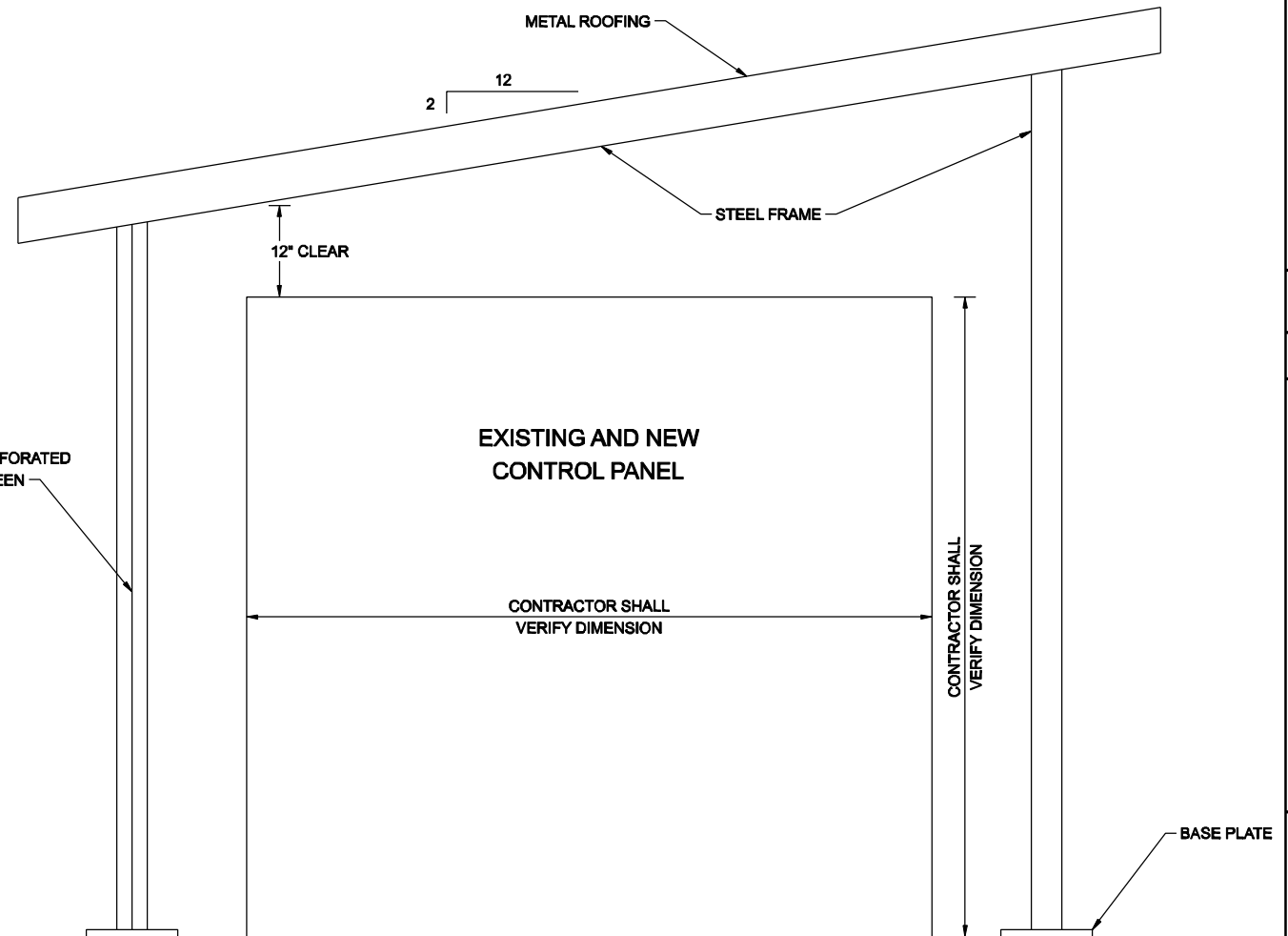


NOTES:

1. PROVIDE SUNSHADE SUPPORT STRUCTURE ESSENTIALLY SIMILAR TO THE SCHEMATIC SHOWN IN DETAIL. MATERIAL SHALL BE ASTM A36 STEEL BOLTED AND WELDED CONSTRUCTION.
2. PROVIDE TUBULAR ALUMINUM FRAME TO SUPPORT PERFORATED PLATE. CLEAR SPANS SHALL NOT EXCEED 4 FEET. ANCHOR FRAME PLATE ASSEMBLY TO SUN SHADE STRUCTURE AND SLAB. PROVIDE 2 COATS OF BLACK MASTIC ON ALL ALUMINUM SURFACES IN CONTACT WITH CONCRETE OR CEMENTITIOUS GROUT.
3. STAINLESS STEEL HARDWARE REQUIRED (TYPE 316)
4. SUBMIT CUSTOM DESIGN AND CALCULATIONS, STAMPED BY A REGISTERED ENGINEER. DESIGN SHALL COMPLY WITH LATEST EDITION OF OREGON STRUCTURAL SPECIALTY CODE.
5. STEEL FRAME SHALL BE BLASTED TO WHITE METAL, SHOP PRIMED, AND COATED WITH 5 MDPT EPOXY WITH 2 MDFT POLYURETHANE. COLOR SHALL BE DARK GREY.
6. METAL ROOF SHALL BE SNAP-LOC STEEL ROOFING, BY CHAMPION METAL OF WASHINGTON, INC. (OR APPROVED EQUAL) (28 GAUGE, ZINC COATED AND PAINTED). COLOR SHALL BE GREY, OR AS APPROVED BY OWNER.
7. SEE DWG. 90-E-101 FOR LOCATION.
8. ANCHOR TO EXISTING CONCRETE SLAB WITH 1/2" MINIMUM ADHESIVE ANCHOR BOLTS (6" EMBEDDING) 4 BOLTS EACH FOOT.



PLAN



SECTION

MURPHY ROAD PUMP STATION
SUN SHADE

FOR
SIGNATURES
AND SEALS REFER
TO ORIGINAL
DRAWINGS, DATED
DEC 2009

NO.	DATE	DR	CHK	APVD	APPROVED-BY
		J. STALLARD	R. LUKE	J. McWADE	

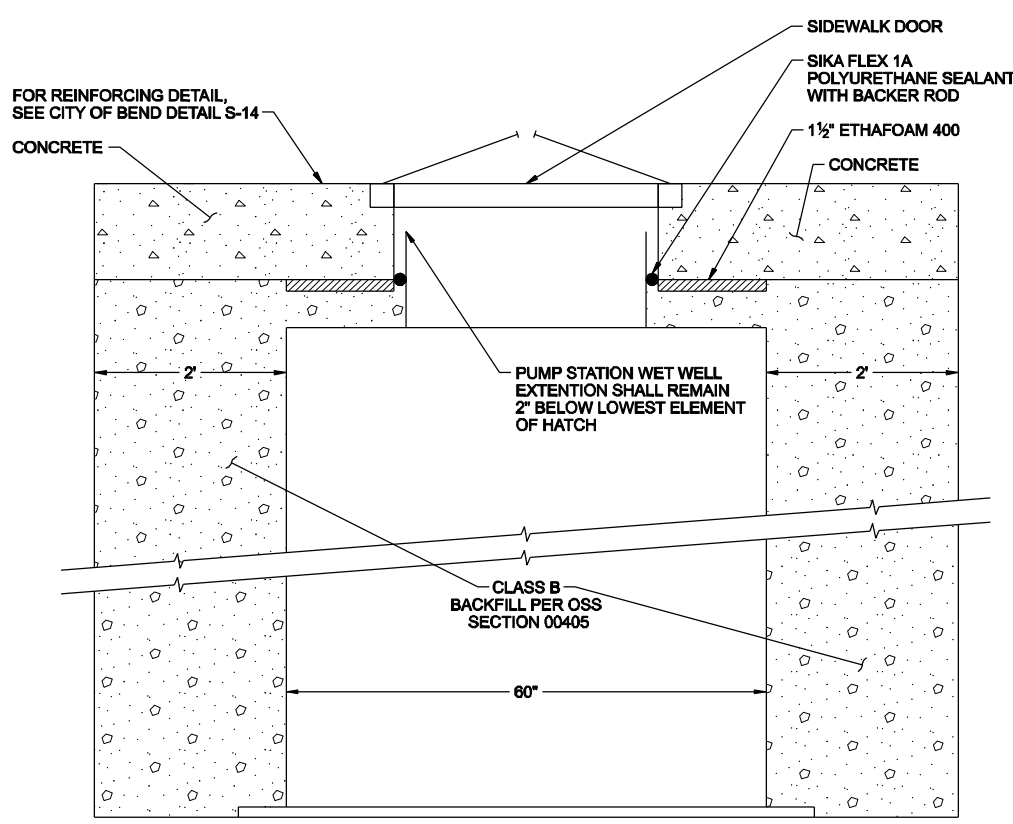
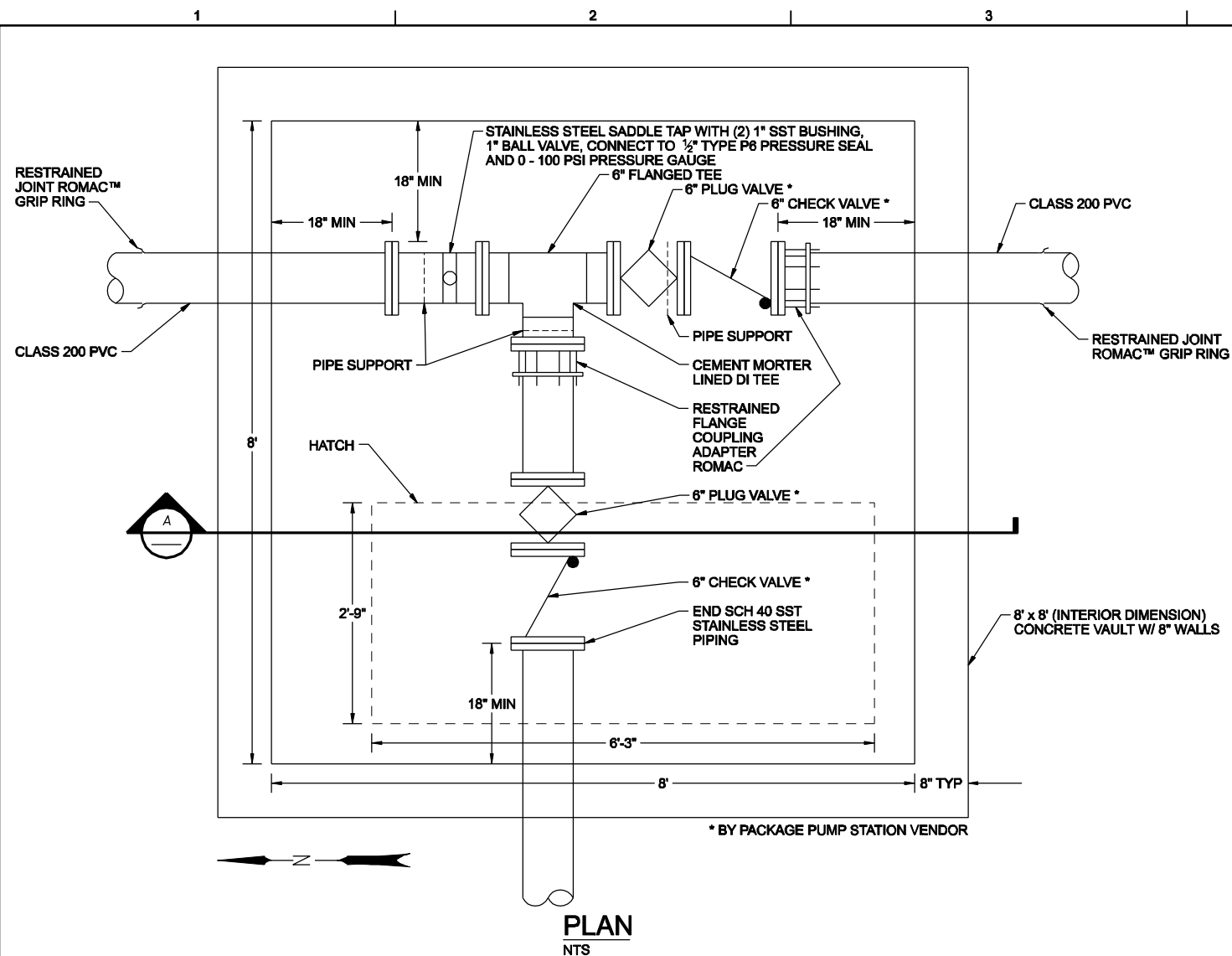
SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

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CIVIL
DETAILS

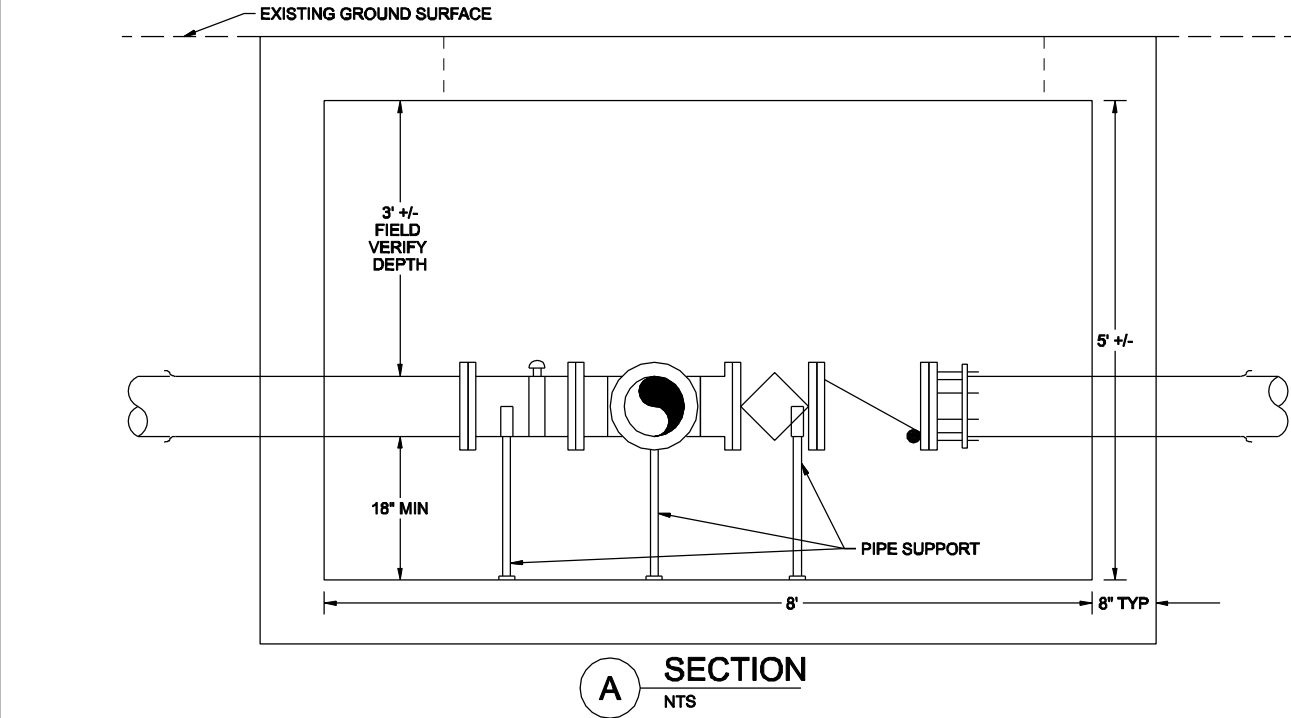
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SHEET	41 OF 45



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**PACKAGE PUMP STATION
TRAFFIC RATED COVER**



**PACKAGE PUMP STATION
VALVE VAULT**

NOTE:
1. PROVIDE 2" EXTRUDED POLYSTYRENE FOAM (XPS) ON INTERIOR OF VALVE VAULT CEILING AND TOP 24" OF WALLS. ADHERE TO CONCRETE WITH INSULATION MANUFACTURERS RECOMMENDED ADHESIVE. PROVIDE 2" XPS AT HATCH OPENING HELD IN PLACE WITH STAINLESS STEEL HARDWARE.



FOR SIGNATURES AND SEALS REFER TO ORIGINAL DRAWINGS, DATED DEC 2009

NO.	DATE	DR	REVISION	CHK	APVD	BY	APVD
		J. STALLARD		R. LUKE			
							J. McMADE

SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

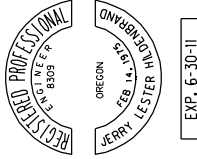
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CIVIL
DETAILS

VERIFY SCALE	BAR IS ONE INCH ON ORIGINAL DRAWING.
DATE	MARCH 2010
PROJ	362936
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SHEET	42 OF 45

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SYMBOL	DESCRIPTION
LEGEND	
	CONNECTION POINT TO EQUIPMENT SPECIFIED. RACEWAY, CONDUCTOR, TERMINATION AND CONNECTION IN THIS DIVISION.
	PANELBOARD - SURFACE MOUNTED
	MOTOR, SQUIRREL CAGE INDUCTION, HORSE POWER INDICATED
	GENERATOR, VOLTAGE AND SIZE AS INDICATED.
	EXPOSED CONDUIT AND CONDUCTORS*
	CONDUIT AND CONDUCTOR CALLOUT, SEE LEGEND.
	DIRECT BURIED CONDUIT
	SPECIAL PURPOSE RECEPTACLE
	DEMOLISH

SYMBOL	DESCRIPTION
ABBREVIATIONS	
A	AMPERE, AUTOMATIC
AC	ALTERNATING CURRENT
AFD	ADJUSTABLE FREQUENCY DRIVE
AFF	ABOVE FINISHED FLOOR
ATS	AUTOMATIC TRANSFER SWITCH
BKR	BREAKER
C	CONDUIT, CONTACTOR, CONDUCTOR, CLOSE
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
CT	CURRENT TRANSFORMER, CABLE TRAY
DC	DIRECT CURRENT
DP	DISTRIBUTION PANEL
E	EMPTY
EXST	EXISTING
F, FU	FUSE
FREQ	FREQUENCY
G	GROUND
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
HH	HANDHOLE
HOA	HAND-OFF-AUTO
HP	HORSEPOWER
HS	HAND SWITCH
HZ	HERTZ
IC	INTERRUPTING CAPACITY
J, JB	JUNCTION BOX
KA	KILOAMPERES
KV	KILOVOLT
KVA	KILOVOLT AMPERES
KW	KILOWATTS
M	MAGNETIC CONTACTOR COIL, MOTOR, MANUAL
MH	MANHOLE, MOUNTING HEIGHT
MSC	MANUFACTURER SUPPLIED CABLE
MTS	MANUAL TRANSFER SWITCH
NC	NORMALLY CLOSED
N.O.	NORMALLY OPEN
NTS	NOT TO SCALE
OL	OVERLOAD RELAY
PB	PULL BOX
RGS	RIGID GALVANIZED STEEL CONDUIT
SS	START STOP
SST	STAINLESS STEEL
SV	SOLENOID VALVE
SWBD	SWITCHBOARD
TYP	TYPICAL
V	VOLTAGE, VOLTS
W	WATTS
WP	WEATHERPROOF
XFMR	TRANSFORMER



NO.	DATE	DR	REVISION	CHK	APVD	BY	APVD

APPROVED-BY: J. McMADE
 J. ZAHIR
 GJ LOVE
 DR

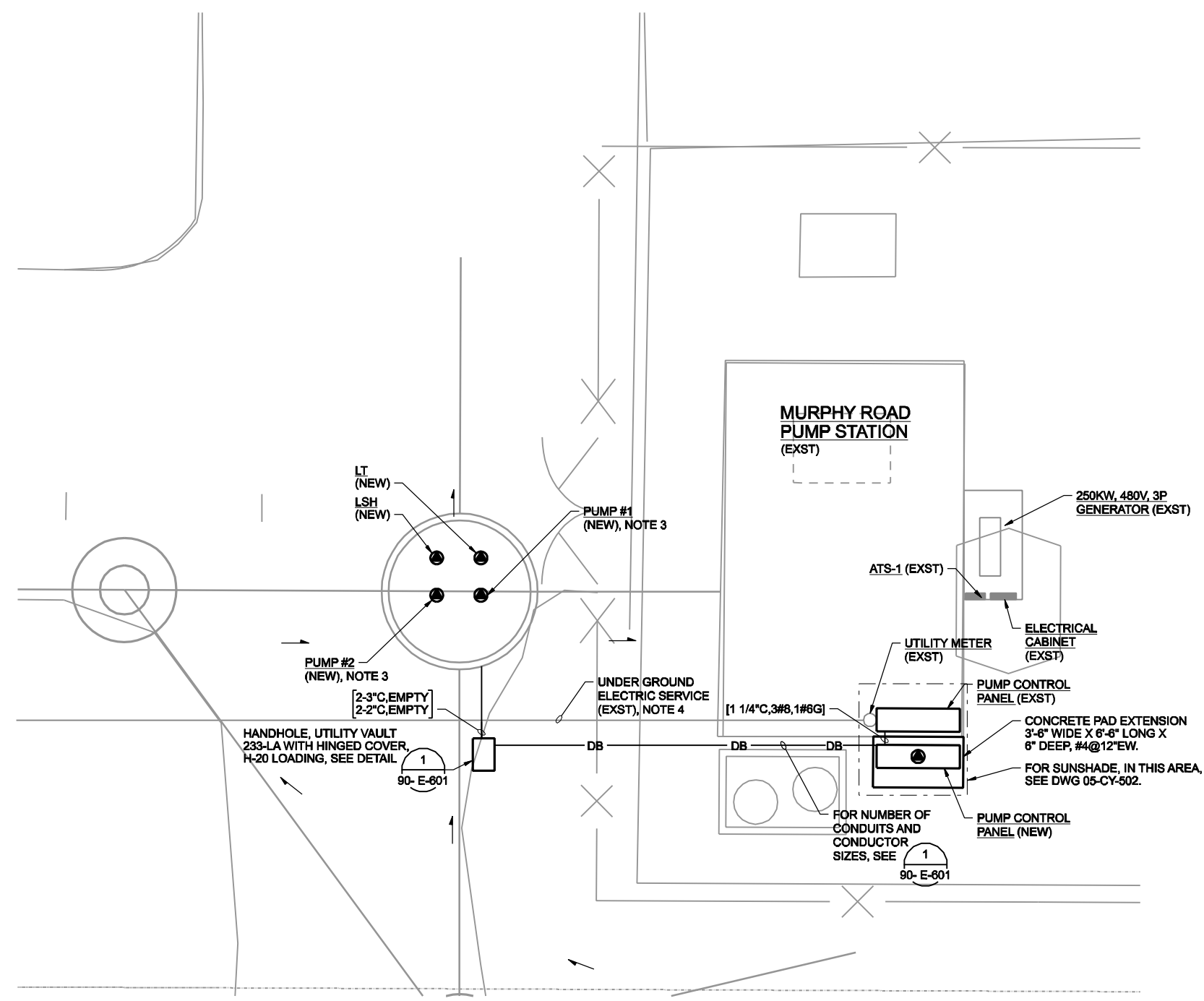
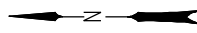
SOUTHEAST INTERCEPTOR
 MURPHY ROAD SEGMENT
 CITY OF BEND, OREGON

CH2MHILL
 ELECTRICAL
 LEGEND AND ABBREVIATIONS

VERIFY SCALE
 BAR IS ONE INCH ON ORIGINAL DRAWING.
 0 1"

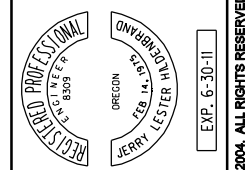
DATE	MARCH 2010
PROJ	362936
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SHEET	43 OF 45

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ELECTRICAL SITE PLAN
SCALE: 1"=5'

- NOTES:**
1. LOCATIONS ARE APPROXIMATE, CONFIRM LOCATIONS AT SITE PRIOR TO CONSTRUCTION.
 2. INSTALL CONDUIT SEALS TO ISOLATE CLASS 1 DIVISION 1 WELL AREA.
 3. POWER AND CONTROL MSC CABLES PROVIDED BY PUMP VENDOR.
 4. DO NOT DAMAGE EXISTING CONDUITS AND CONDUCTORS.
 5. SEE "PROJECT SPECIAL CONDITIONS" FOR SEQUENCING REQUIREMENTS.



NO.	DATE	DR	CHK	APVD	APPROVED-BY
		J. ZAHIR	G. LOVE	J. McMADE	APVD
					BY APVD

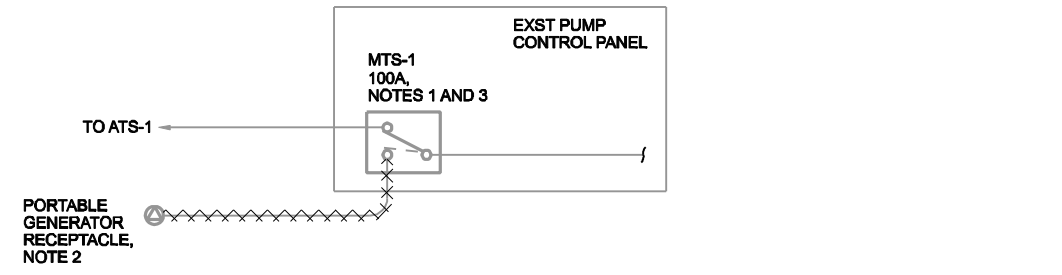
CH2MHILL
ELECTRICAL
SITE PLAN
MURPHY ROAD PUMP STATION
CONNECTION

SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

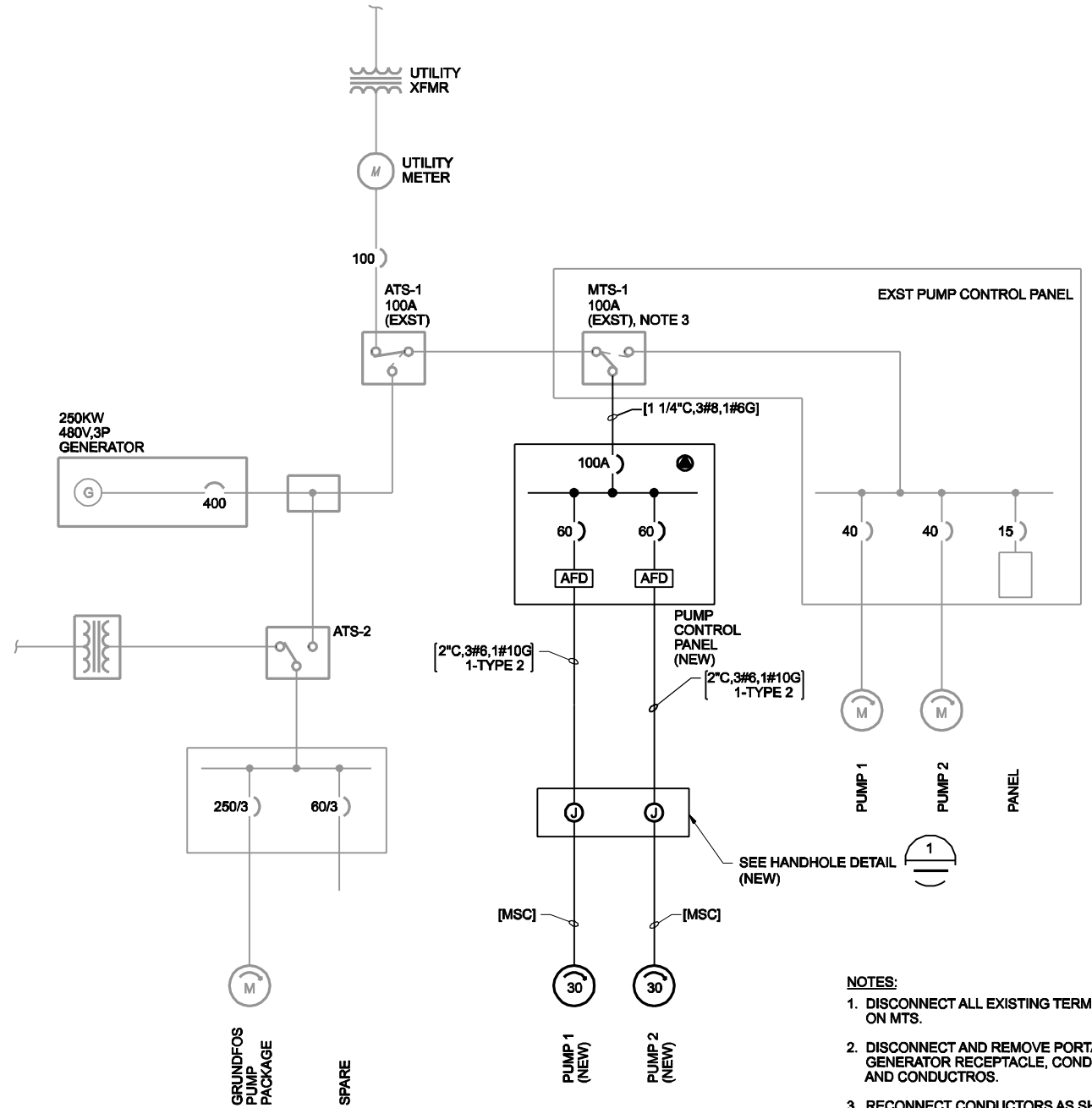


VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	MARCH 2010
PROJ	362836
DWG	90-E-101
SHEET	44 OF 45

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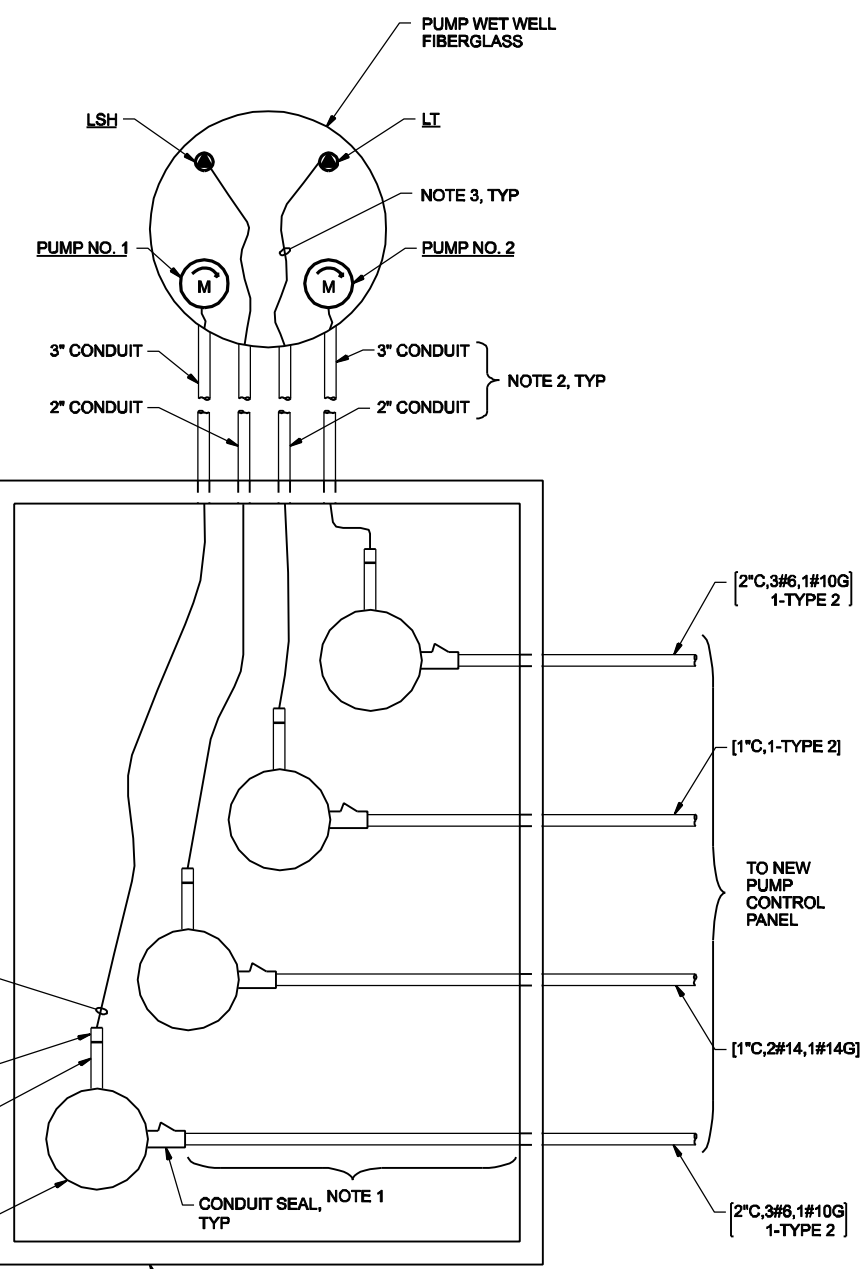


PARTIAL EXISTING ONE-LINE DIAGRAM



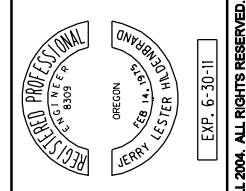
NEW ONE-LINE DIAGRAM - 2

- NOTES:**
1. DISCONNECT ALL EXISTING TERMINATIONS ON MTS.
 2. DISCONNECT AND REMOVE PORTABLE GENERATOR RECEPTACLE, CONDUIT AND CONDUCTORS.
 3. RECONNECT CONDUCTORS AS SHOWN ON NEW ONE LINE DIAGRAM.
 4. DEVICES / EQUIPMENT SHOWN BOLD ARE NEW.



1 HANDHOLE DETAIL
NTS

- NOTES:**
1. NO CONDUIT UNIONS OR FITTINGS BETWEEN CONDUIT SEAL AND HANDHOLE WALL.
 2. COORDINATE CONDUIT CONNECTION AT PUMP WET WELL WITH PUMP WET WELL SUPPLIER.
 3. PROVIDE TYPE 316 STAINLESS STEEL CORD GRIPS FOR ALL CABLES WITHIN PUMP WET WELL.



NO.	DATE	DR	CHK	APVD	APPROVED-BY
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SOUTHEAST INTERCEPTOR
MURPHY ROAD SEGMENT
CITY OF BEND, OREGON

CH2MHILL
ELECTRICAL
ONE-LINE AND BLOCK DIAGRAMS



VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE	MARCH 2010
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SHEET	45 OF 45