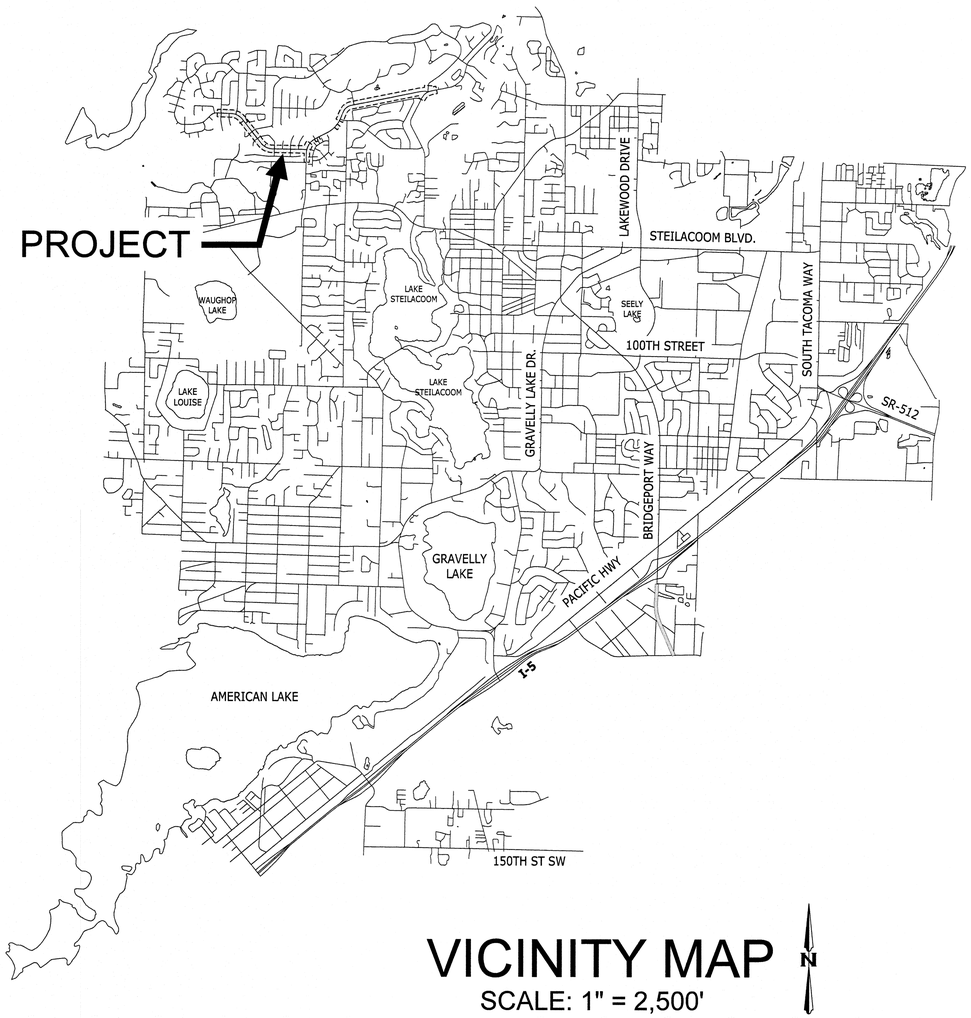
ONYX DRIVE ROADWAY IMPROVEMENTS

CITY PROJECT NO. 302.0138

PROJECT CONTACT NUMBER
ERIC SWANSTROM, P.E. PROJECT MANAGER (253) 983-7751 DESK (253) 279-5349 CELL ESWANSTROM@CITYOFLAKEWOOD.US
CITY OF LAKEWOOD PUBLIC WORKS 253-983-7795



VICINITY MAP

SCALE: 1" = 2,500'

N

SHEET INDEX		
SHEET	DRAWING	TITLE
1	CS1	COVER SHEET
2	LA1	LEGEND AND ABBREVATIONS
3	AL1	ALIGNMENT AND SURVEY CONTROL PLAN - STA 100+00 TO 134+74
4	AL2	ALIGNMENT AND SURVEY CONTROL PLAN - STA 200+00 TO 247+36
5	RS1	ROADWAY SECTIONS
6	SP1	SITE PREPERATION PLAN - STA 100+00 TO 110+00
7	SP2	SITE PREPERATION PLAN - STA 110+00 TO 119+75
8	SP3	SITE PREPERATION PLAN - STA 119+75 TO 129+75
9	SP4	SITE PREPERATION PLAN - STA 129+75 TO 134+74
10	SP5	SITE PREPERATION PLAN - STA 214+00 TO 223+50
11	SP6	SITE PREPERATION PLAN - STA 223+50 TO 233+50
12	SP7	SITE PREPERATION PLAN - STA 233+50 TO 242+75
13	SP8	SITE PREPERATION PLAN - STA 241+40 TO 246+00
14	SP9	SITE PREPERATION PLAN - ONYX DR AND PHILLIPS DR INTX
15	PP1	ROADWAY PLAN AND PROFILE - STA 100+00 TO 105+00
16	PP2	ROADWAY PLAN AND PROFILE - STA 105+00 TO 110+00
18	PP4	ROADWAY PLAN AND PROFILE - STA 115+00 TO 119+75
17	PP3	ROADWAY PLAN AND PROFILE - STA 110+00 TO 115+00
19	PP5	ROADWAY PLAN AND PROFILE - STA 119+75 TO 124+75
20	PP6	ROADWAY PLAN AND PROFILE - STA 124+75 TO 129+75
21	PP7	ROADWAY PLAN AND PROFILE - STA 129+75 TO 134+74
22	PP8	87TH AVE SW PLAN AND PROFILE - STA 150+25 TO 155+25
23	PP9	ROADWAY PLAN AND PROFILE - STA 214+00 TO 218+75
24	PP10	ROADWAY PLAN AND PROFILE - STA 218+75 TO 223+50
25	PP11	ROADWAY PLAN AND PROFILE - STA 223+50 TO 228+50
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27	PP13	ROADWAY PLAN AND PROFILE - STA 233+50 TO 238+00
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41	PM4	PAVEMENT MARKING AND SITE PLAN - STA 129+75 TO 134+74
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43	PM6	PAVEMENT MARKING AND SITE PLAN - STA 223+50 TO 233+50
44	PM7	PAVEMENT MARKING AND SITE PLAN - STA 233+50 TO 242+75
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Know what's **below.** **Call** before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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APPROVED FOR CONSTRUCTION

Paul A. Bucich 2/12/2020

PAUL A. BUCICH, P.E. PUBLIC WORKS ENG. DIR. DATE

SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER otherwise

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS

DRAWING NAME: COVER SHEET

PROJECT: 302.0138

DRAWING: CS1

SHEET: 1 of 64

P:\19000\19046.00.00 - Onyx Dr Improvements\Civil\07-CAD\BCRA\Production Dwgs\COVER SHEET.dwg 2/12/20

WATER SYMBOLS

EXIST.	PROP.	DESCRIPTION
		BLOW-OFF ASSEMBLY
		CAP/PLUG
		COUPLING
		REDUCER
		THRUST BLOCK
		WATER METER
		FIRE HYDRANT
		BUTTERFLY VALVE
		GATE VALVE
		AIR RELEASE VALVE
		SPRINKLER HEAD

SURFACE FEATURE /LANDSCAPE SYMBOLS

EXIST.	PROP. /RELOCATE	DESCRIPTION
		JUNCTION BOX (TYPE I, II, III)
		MAILBOX
		SCHOOL ZONE FLASHING LIGHT ASSEMBLY
		SHRUB /HEDGE
		STREET SIGN
		STREET LIGHT ASSEMBLY
		TRAFFIC SIGN POST
		TRAFFIC BARRIER GUARDRAIL
		TREE (CONIFEROUS)
		TREE (DECIDUOUS)

CHANNELIZATION SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		LEFT TURN ARROW
		RIGHT TURN ARROW
STOP		STOP
YIELD		YIELD

EROSION CONTROL

	SILT FENCE
	INLET PROTECTION
	SEED, FERTILIZE, AND MULCH
	BARK MULCH

GENERAL NOTES

1. PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR SHALL INSTALL ALL BMPS AS SHOWN ON THESE PLANS OR DETERMINED BY THE ENGINEER IN THE FIELD, TO MINIMIZE EROSION AND PREVENT SEDIMENT FROM ENTERING THE STORM SYSTEM.
2. THE CONTRACTOR IS RESPONSIBLE FOR CONTAINING SEDIMENT AND DEBRIS FROM ENTERING THE STORMWATER SYSTEM. IF THE BMPS SHOWN ON THE PLAN ARE FOUND TO BE INSUFFICIENT, THE CONTRACTOR SHALL INSTALL ADDITIONAL BMPS TO ELIMINATE CONSTRUCTION STORMWATER POLLUTION.
3. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IN THE EVENT THAT THE CONTRACTOR DISCOVERS CONDITIONS OR ACTIVITIES THAT WILL DIMINISH THE WATER QUALITY DOWNSTREAM.

SANITARY /STORM SEWER SYMBOLS

EXIST.	PROP.	DESCRIPTION
		SANITARY SEWER CLEANOUT
		SANITARY SEWER MANHOLE
		STORM DRAIN CATCH BASIN, TYPE 1
		STORM DRAIN CATCH BASIN, TYPE 2
		STORM DRAIN CULVERT
		DRAINAGE DITCH

GAS /POWER /TELEPHONE SYMBOLS

EXIST.	PROP.	DESCRIPTION
		GAS VALVE
		UTILITY POLE
		UTILITY POLE ANCHOR
		TELEPHONE RISER
T	T	TELEPHONE VAULT
		PAD MOUNTED TRANSFORMER
		POLE MOUNTED TRANSFORMER
P	P	POWER VAULT

GENERAL NOTES

1. CUT/FILL LIMIT OR SAWCUT LINE IS THE CLEARING AND GRUBBING LIMITS.
2. REMOVE EXISTING IMPROVEMENTS WITHIN CLEARING LIMITS UNLESS OTHERWISE NOTED.
3. REMOVE TREES/SHRUBS/VEGETATION WITHIN CLEARING LIMITS UNLESS OTHERWISE NOTED.
4. PROTECT EXISTING UTILITIES UNLESS OTHERWISE NOTED.

DUMP NO WASTE INTO STREAMS

ABBREVIATIONS

ABAND.	ABANDON
ACP	ASPHALT CONCRETE PVMNT.
AP	ANGLE POINT
APPROX.	APPROXIMATELY
ASPH.	ASPHALT
AVE	AVENUE
BOT.	BOTTOM
BLDG.	BUILDING
BLVD.	BOULEVARD
BNC	BEGIN NORMAL CROWN
BSW	BACK OF SIDEWALK
CB	CATCH BASIN
CDF	CONTROLLED DENSITY FILL
CL	CENTERLINE
CO	CLEAN OUT
CONC.	CONCRETE
CONT.	CONTINUE
CMP	CORRUGATED METAL PIPE
CPE	CORRUGATED POLYETLENE PIPE
CR	CROWN
CSTC	CRUSHED SURFACING TOP COURSE
CU.FT.	CUBIC FEET
CU.YD.	CUBIC YARD
DEG.	DEGREE
DBL.	DOUBLE
DI	DUCTILE
DRWY	DRIVEWAY
E	EAST
EA.	EACH
EFS	END OF FULL SUPER
EG	EDGE OF GRAVEL
EGCL	EXISTING GRADE CENTERLINE
EL.	ELEVATION
EP	EDGE OF PAVEMENT
EXC.	EXCAVATION
EX.,EXIST.	EXISTING
FGCL	FINISHED GRADE CENTERLINE
FH	FIRE HYDRANT
FT	FOOT
FL	FLANGED JOINT
G	GAS
GV	GAS VALVE
GE	GRATE ELEVATION
GRVL	GRAVEL
HORIZ.	HORIZONTAL
HMA	HOT MIX ASPHALT
HPG	HIGH PRESSURE GAS
IE	INVERT ELEVATION
IRR.	IRRIGATION
L	LENGTH
LC	LEVEL CROWN
LT	LEFT
LTBC	LEFT TOP BACK OF CURB
MH	MANHOLE
MJ	MECHANICAL JOINT
MAX.	MAXIMUM
MIN.	MINIMUM
MISC.	MISCELLANEOUS
MON.	MONUMENT
N	NORTH
NTS	NOT TO SCALE
N.U.	NOT USED
O.C.	ON CENTER
PVMT.	PAVEMENT
PED.	PEDESTRIAN
PL	PROPERTY LINE
PC	POINT OF CURVE
PT	POINT OF TANGENT
PI	POINT OF INTERSECTION
PROP.	PROPOSED
PVC.	POINT OF VERTICAL CURVE
PVC	POLY VINYL CHLORIDE
PVI	POINT OF VERT. INTERSECTION
PVT	POINT OF VERTICAL TANGENT
R	RADIUS
RC	REVERSE CROWN
RCP	REINFORCED CONCRETE PIPE
RT	RIGHT
R/W	RIGHT-OF-WAY
RD.	ROAD
RTBC	RIGHT TOP BACK OF CURB
S	SOUTH
SS	SANITARY SEWER
SAN.	SANITARY
SD	STORM DRAIN
SDMH	MANHOLE
S'W	SIDEWALK
SPECS.	SPECIFICATIONS
STD.	STANDARD
STA.	STATION
ST.	STREET
T	TELEPHONE
T.B.C.	TOP BACK OF CURB
T.O.C.	TOP OF CURB
TYP.	TYPICAL
U.P.	UTILITY POLE
UNK.	UNKNOWN
V	VALVE
VAP	VERTICAL ANGLE POINT
V.C.	VERTICAL CURVE
VERT.	VERTICAL
W	WEST
WM	WATER METER
W.M.	WILLAMETTE MERIDIAN
W.V.	WATER VALVE
W/	WITH
Z	ZONE

LINE TYPES LEGEND

EXIST.	DESCRIPTION
	BARBED WIRE FENCE
	CHAIN LINK FENCE
	WOOD FENCE
	HOGWIRE FENCE
	METAL/IRON FENCE
	GUARD RAIL/CABLE FENCE
	WATER LINE
	GAS LINE
T(XX)	TELEPHONE LINE (OH) OR (UG)
P(XX)	POWER LINE (OH) OR (UG)
SD	STORM LINE
SS	SEWER LINE
	ROCKERY
	KEYSTONE WALL
	MISCELANEOUS ROCKS
	DECIDUOUS TREE
	CONIFEROUS TREE
	TREE DRIPLINE
	CONCRETE
	GRAVEL/SAND (AS NOTED)
	ASPHALT

PROP.	DESCRIPTION
	CONSTRUCTION CENTERLINE
	CLEARING LIMITS
	TRAFFIC CURB AND GUTTER
	PAVEMENT SAWCUT LINE
D	STORM DRAIN LINE
D	INFILTRATION TRENCH
	CAST-IN-PLACE CONCRETE WALL
X X X X X X X X	REMOVE EXISTING CURB
/ / / / / / / /	REMOVE EXISTING PIPE / UTILITY
F F F	FILL LIMIT
C C C	CUT LIMIT

PAVEMENT HATCHES

PAVEMENT REMOVAL	COBBLES / STORMWATER INTERCEPTOR TRENCH
CEMENT CONCRETE PAVEMENT / DRIVEWAY ENTRANCE	COLORED CEMENT CONCRETE SIDEWALK
CEMENT CONCRETE SIDEWALK / CURB RAMP	COLORED CEMENT CONCRETE PULLOUT
HMA PAVEMENT	GRAVEL SURFACING
HMA OVERLAY	4"-6" COBBLE SURFACING WITH SALVAGED BOULDERS

CONSTRUCTION SYMBOLS

X	CONSTRUCTION NOTES
X	PAVEMENT MARKING NOTES
X	SIGN NOTES
X	SITE PREPARATION NOTES
X	EROSION & SEDIMENT CONTROL NOTES
X	SECTION NOTES
X	STORM DRAINAGE NOTES

SURVEY SYMBOLS

EXIST.	PROP.	DESCRIPTION
		MONUMENT (IN CASE)
		SURVEY IRON PIPE
		SURVEY CONTROL NAIL
		SURVEY CONTROL "X" SCRIBE
		BENCH MARK

THE EXISTING TOPOGRAPHIC AND PHYSICAL FEATURES SHOWN ON THESE PLANS ARE BASED ON A COMBINATION OF:
- FIELD SURVEY AND AS-BUILTS FROM PIERCE COUNTY
- FIELD SURVEY DATA BY THE SURVEYOR OF RECORD
- FRANCHISE UTILITY COMPANY RECORDS
- FIELD RECONNAISSANCE BY BCRA

THIS WAS THE INFORMATION AVAILABLE AT THE TIME OF PLAN PREPARATION. ACTUAL CONDITIONS MAY BE DIFFERENT. THE CONTRACTOR MAY ENCOUNTER VARIATIONS BETWEEN ACTUAL CONDITIONS AND THOSE SHOWN. THESE VARIATIONS WILL NOT BE THE BASIS FOR A CLAIM OR EXTRA COMPENSATION.

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE CITY OF LAKEWOOD. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE ENCOUNTER BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

811 Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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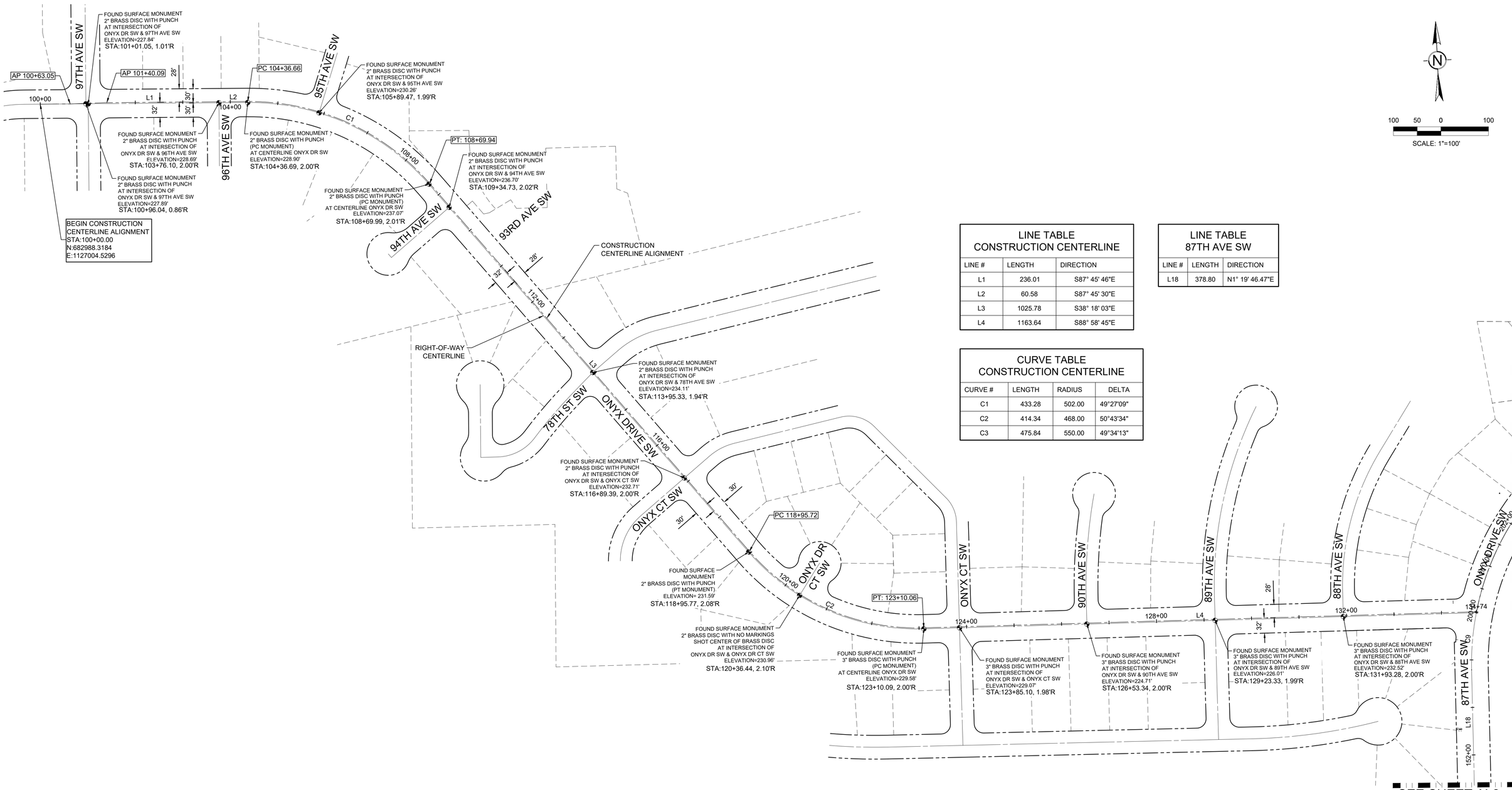
CITY OF LAKEWOOD, WA 1996

SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: LEGEND AND ABBREVIATIONS

PROJECT: 302.0138
DRAWING: LA1
SHEET: 2 of 64

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LINE TABLE CONSTRUCTION CENTERLINE		
LINE #	LENGTH	DIRECTION
L1	236.01	S87° 45' 46"E
L2	60.58	S87° 45' 30"E
L3	1025.78	S38° 18' 03"E
L4	1163.64	S88° 58' 45"E

LINE TABLE 87TH AVE SW		
LINE #	LENGTH	DIRECTION
L18	378.80	N1° 19' 46.47"E

CURVE TABLE CONSTRUCTION CENTERLINE			
CURVE #	LENGTH	RADIUS	DELTA
C1	433.28	502.00	49°27'09"
C2	414.34	468.00	50°43'34"
C3	475.84	550.00	49°34'13"

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APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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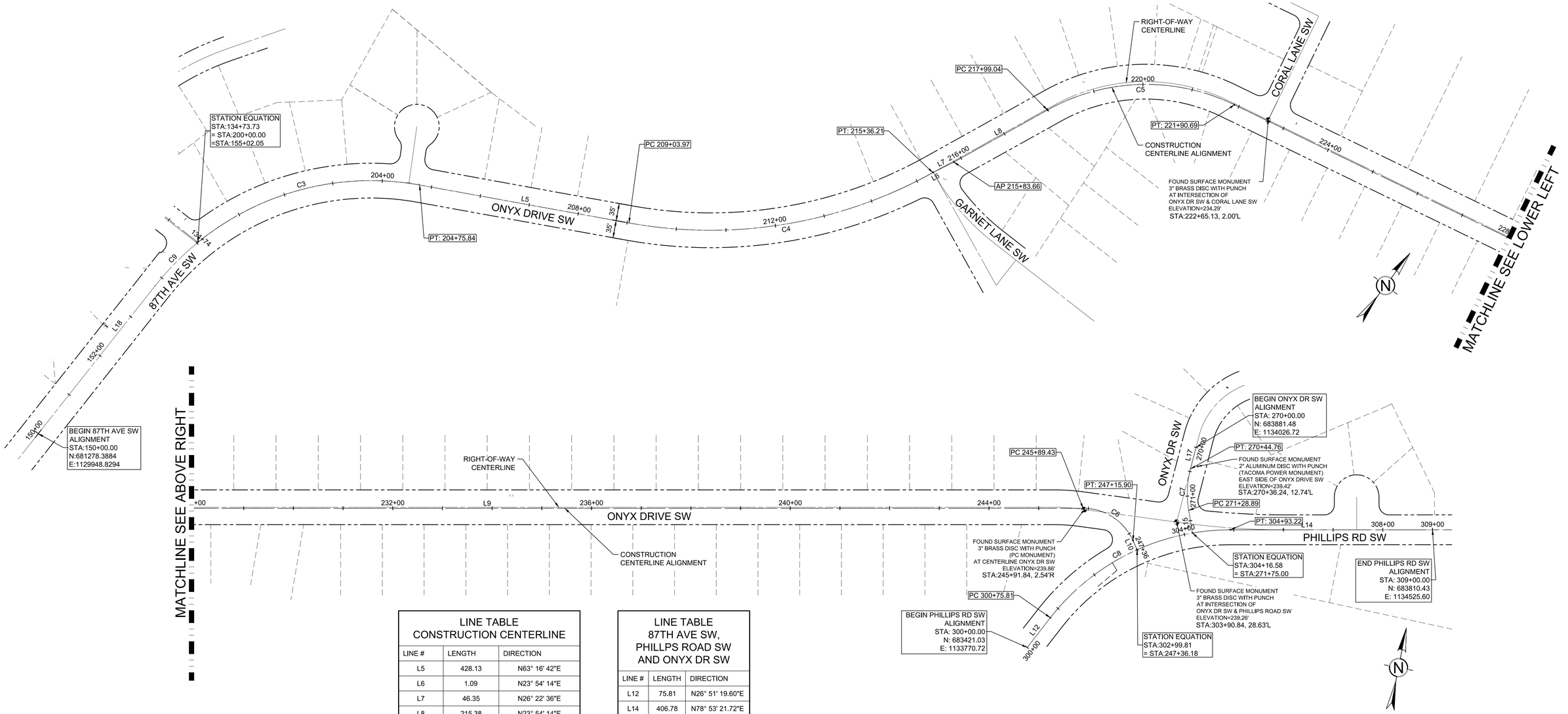
CITY OF LAKEWOOD, WA 1996

SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: ALIGNMENT AND SURVEY CONTROL PLAN - STA 100+00 TO 134+74

PROJECT: 302.0138
DRAWING: AL1
SHEET: 3 of 64

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LINE TABLE
CONSTRUCTION CENTERLINE

LINE #	LENGTH	DIRECTION
L5	428.13	N63° 16' 42"E
L6	1.09	N23° 54' 14"E
L7	46.35	N26° 22' 36"E
L8	215.38	N23° 54' 14"E
L9	2398.73	N78° 54' 14"E
L10	20.28	S35° 13' 16"E

LINE TABLE
87TH AVE SW, PHILLPS ROAD SW AND ONYX DR SW

LINE #	LENGTH	DIRECTION
L12	75.81	N26° 51' 19.60"E
L14	406.78	N78° 53' 21.72"E
L15	46.11	N20° 39' 49.18"W
L17	44.76	N3° 26' 11.72"E
L18	378.80	N1° 19' 46.47"E

CURVE TABLE
CONSTRUCTION CENTERLINE

CURVE #	LENGTH	RADIUS	DELTA
C3	475.84	550.00	49°34'13"
C4	632.24	920.00	39°22'28"
C5	391.65	408.00	55°00'00"
C6	126.47	110.00	65°52'31"

CURVE TABLE
87TH AVE SW, PHILLIPS ROAD SW AND ONYX DR SW

CURVE #	LENGTH	RADIUS	DELTA
C7	84.13	200.00	24.10
C8	417.41	459.62	52.03
C9	123.25	569.99	12.39

Know what's **below.** **Call** before you dig.

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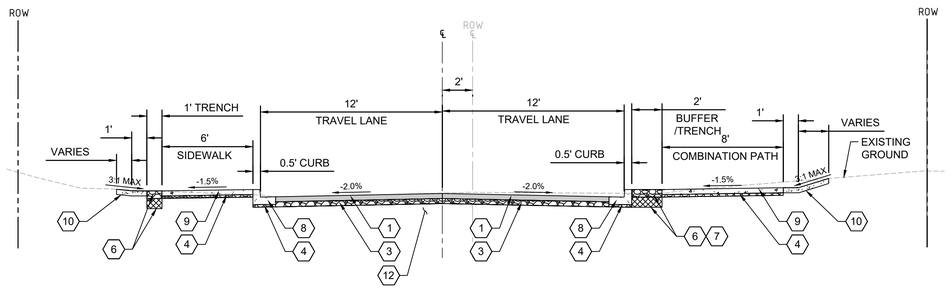
SHANNON MARIE PODGORSKI · STATE OF WASHINGTON · 58052 · REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS

DRAWING NAME: ALIGNMENT AND SURVEY CONTROL PLAN - STA 200+00 TO 247+36

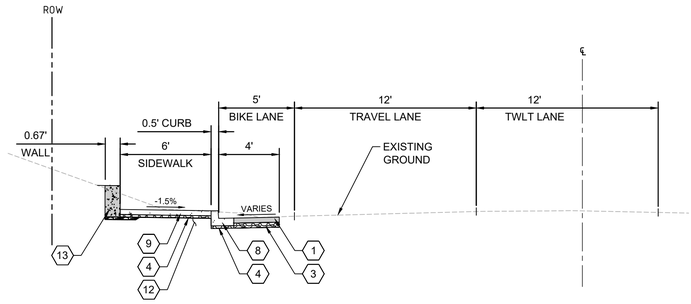
PROJECT: 302.0138
DRAWING: AL2
SHEET: 4 of 64

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ONYX DRIVE SW-WEST TYPICAL

SCALE: NTS 1

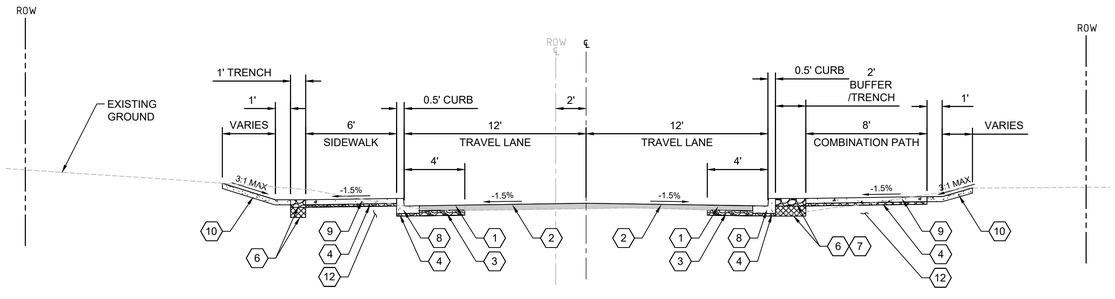


87TH AVENUE SW TYPICAL

SCALE: NTS 2

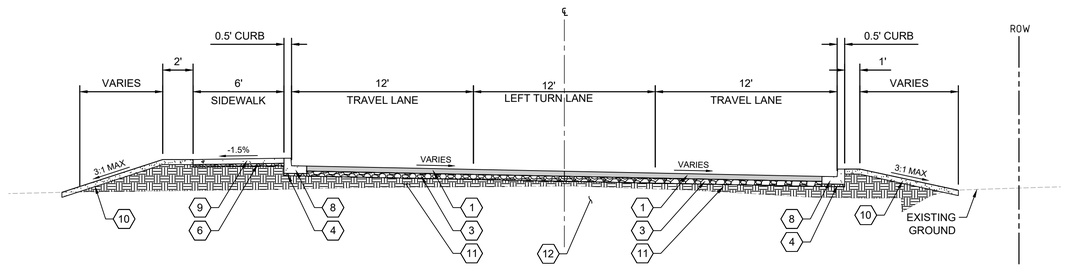
SECTION NOTES:

1. 4" DEPTH HMA CLASS ½" PG 58H-22.
2. MINIMUM 1.5" DEPTH AND MAXIMUM 5" DEPTH HMA CLASS ½" PG 58H-22 OVERLAY.
3. 4" DEPTH CRUSHED SURFACING TOP COURSE.
4. 2" DEPTH CRUSHED SURFACING TOP COURSE.
5. HMA WEDGE CURB PER CITY OF LAKEWOOD STANDARD PLAN FR-04.
6. INTERCEPTOR TRENCH PER DETAIL ON SHEET CD1.
7. COBBLES AND BALLAST REPLACED WITH COLORED CEMENT CONCRETE WHERE SHOWN ON PLANS.
8. CEMENT CONC. TRAFFIC CURB AND GUTTER PER CITY OF LAKEWOOD STANDARD PLAN FR-04.
9. CEMENT CONC. SIDEWALK PER CITY OF LAKEWOOD STANDARD PLAN FR-03.
10. 4" DEPTH TOPSOIL TYPE A.
11. GRAVEL BORROW.
12. PREPARED SUBGRADE.
13. COLORED CEMENT CONCRETE CAST-IN-PLACE WALL PER DETAIL ON SHEET CD2 WHERE SHOWN ON PLANS.



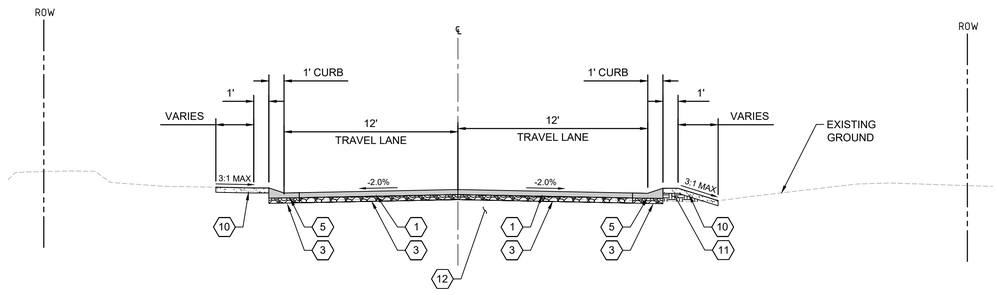
ONYX DRIVE SW-EAST TYPICAL

SCALE: NTS 3



PHILLIPS ROAD SW TYPICAL

SCALE: NTS 4



ONYX DRIVE SW-NORTH TYPICAL

SCALE: NTS 5

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PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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CITY OF LAKEWOOD, WA •1996•

SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: ROADWAY SECTIONS

PROJECT: 302.0138
DRAWING: RS1
SHEET: 5 of 64

P:\19000\19046.00.00 - Onyx Dr Improvements\Civil\07-CAD\BCRA\Production Dwgs\19046C SCTN-W.dwg 2/12/20

SITE PREPARATION NOTES:

1. SAW CUT A NEAT UNIFORM LINE FULL DEPTH OF EXISTING PAVEMENT.
2. REMOVE EXISTING PAVEMENT.
3. REMOVE EXISTING ROCKERY / WALL.
4. REMOVE EXISTING TREE.
5. PROTECT EXISTING SIGN UNTIL REPLACED. REFER TO PAVEMENT MARKING AND SIGNAGE PLAN.
6. REMOVE EXISTING LANDSCAPING FEATURE.
7. REMOVE EXISTING STRUCTURE.
8. PROTECT EXISTING MAILBOX UNTIL REPLACED. REFER TO ROADWAY PLAN.
10. CATCH BASIN INLET PROTECTION PER WSDOT STANDARD PLAN I-40.20-00.
11. SILT FENCE PER WSDOT STANDARD PLAN I-30.15-02.
12. PRESERVE AND PROTECT EXISTING STRUCTURE AND ASSOCIATED LINES.
14. EXISTING UTILITY TO BE RELOCATED BY UTILITY PURVEYOR.
16. REMOVE EXISTING STORM PIPE.

SCALE: 1"=20'

Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

bcra
T 253.627.4367 F 253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

CITY OF LAKEWOOD, WA 1996

SHANNON MARIE PODGORSKI, STATE OF WASHINGTON, 58052, REGISTERED PROFESSIONAL ENGINEER

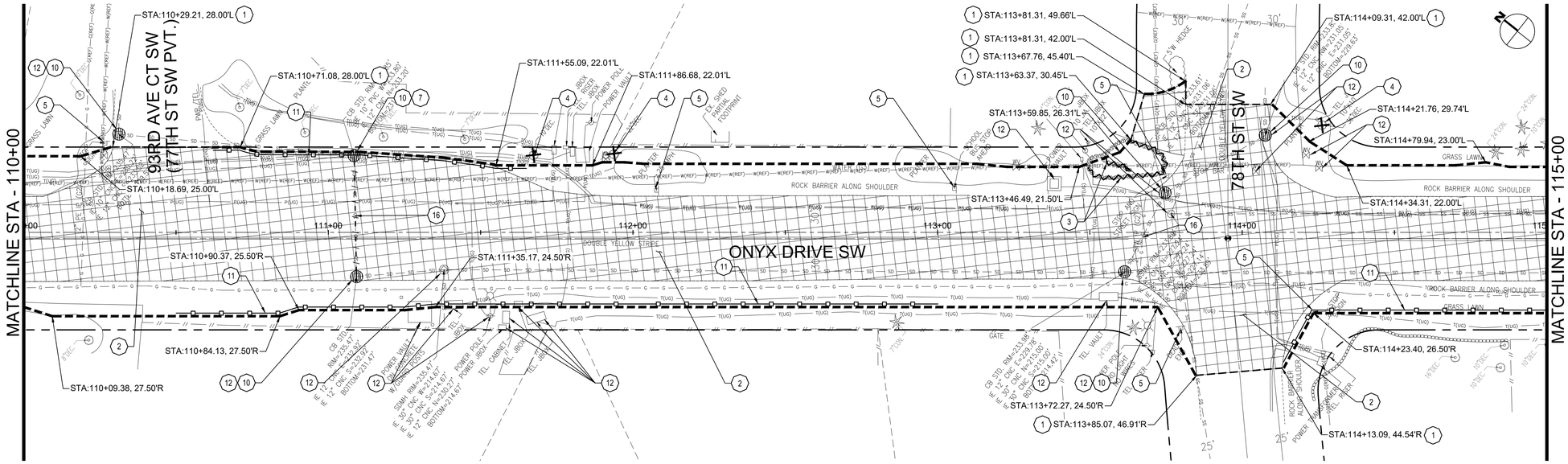
PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: SITE PREPERATION PLAN - STA 100+00 TO 110+00

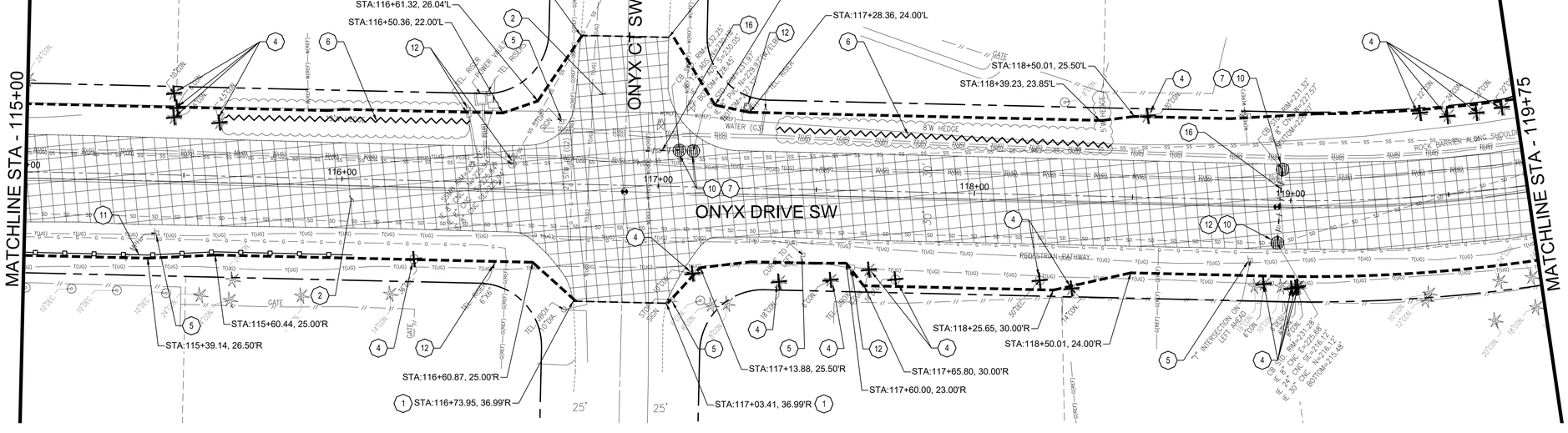
PROJECT: 302.0138
DRAWING: SP1
SHEET: 6 of 64

P:\19000\19046.00.00 - Onyx Dr Improvements\Civil\07-CAD\BCRA\Production Dwgs\SITE PREP W.dwg 2/12/20

SITE PREPARATION NOTES:

1. SAW CUT A NEAT UNIFORM LINE FULL DEPTH OF EXISTING PAVEMENT.
2. REMOVE EXISTING PAVEMENT.
3. REMOVE EXISTING ROCKERY / WALL.
4. REMOVE EXISTING TREE.
5. PROTECT EXISTING SIGN UNTIL REPLACED. REFER TO PAVEMENT MARKING AND SIGNAGE PLAN.
6. REMOVE EXISTING LANDSCAPING FEATURE.
7. REMOVE EXISTING STRUCTURE.
10. CATCH BASIN INLET PROTECTION PER WSDOT STANDARD PLAN I-40.20-00.
11. SILT FENCE PER WSDOT STANDARD PLAN I-30.15-02.
12. PRESERVE AND PROTECT EXISTING STRUCTURE AND ASSOCIATED LINES.
14. EXISTING UTILITY TO BE RELOCATED BY UTILITY PURVEYOR.
16. REMOVE EXISTING STORM PIPE.





20 10 0 20
SCALE: 1"=20'

811 Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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T 253.627.4367 F 253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

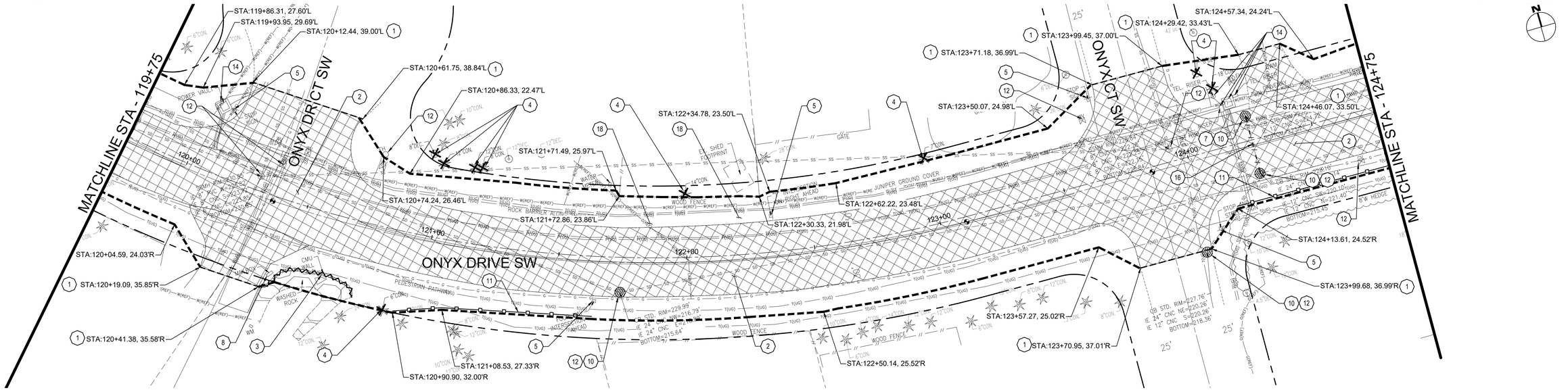
CITY OF LAKEWOOD, WA 1996

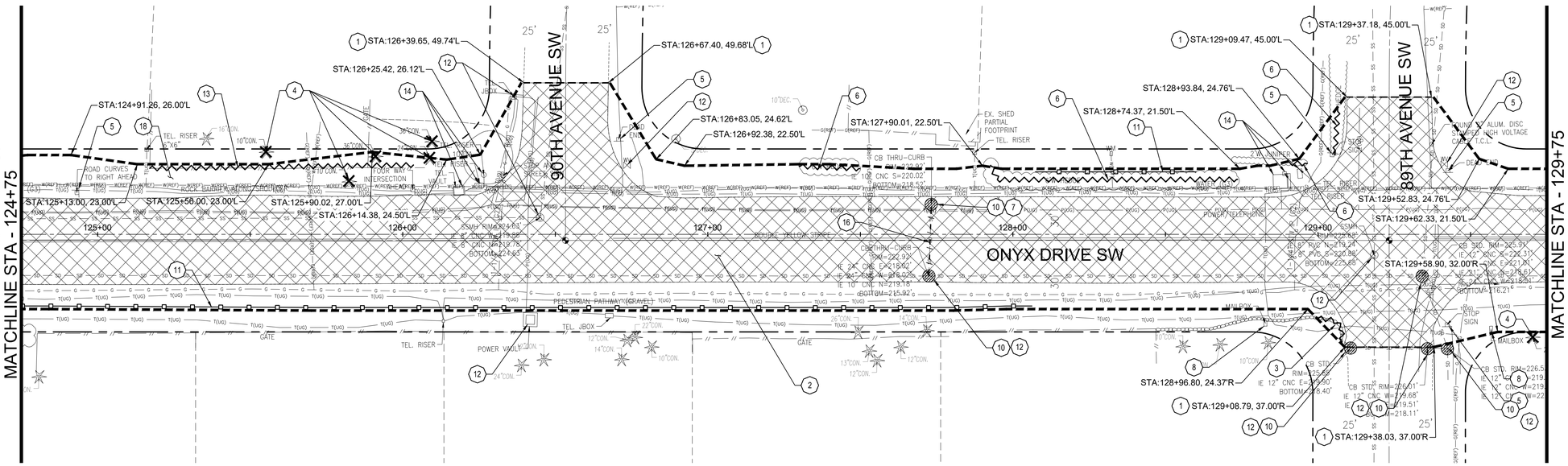
SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: SITE PREPERATION PLAN - STA 110+00 TO 119+75

PROJECT: 302.0138
DRAWING: SP2
SHEET: 7 of 64

P:\19000\19046.00.00 - Onyx Dr Improvements\Civil\07-CAD\BCRA\Production Dwgs\SITE PREP W.dwg 2/12/20





SITE PREPARATION NOTES:

1. SAW CUT A NEAT UNIFORM LINE FULL DEPTH OF EXISTING PAVEMENT.
2. REMOVE EXISTING PAVEMENT.
3. REMOVE EXISTING ROCKERY / WALL.
4. REMOVE EXISTING TREE.
5. PROTECT EXISTING SIGN UNTIL REPLACED. REFER TO PAVEMENT MARKING AND SIGNAGE PLAN.
6. REMOVE EXISTING LANDSCAPING FEATURE.
7. REMOVE EXISTING STRUCTURE.
8. PROTECT EXISTING MAILBOX UNTIL REPLACED. REFER TO ROADWAY PLAN.
10. CATCH BASIN INLET PROTECTION PER WSDOT STANDARD PLAN I-40.20-00.
11. SILT FENCE PER WSDOT STANDARD PLAN I-30.15-02.
12. PRESERVE AND PROTECT EXISTING STRUCTURE AND ASSOCIATED LINES.
13. REMOVE EXISTING WOOD FENCE. COORDINATE REMOVAL WITH PROPERTY OWNER.
14. EXISTING UTILITY TO BE RELOCATED BY UTILITY PURVEYOR.
16. REMOVE EXISTING STORM PIPE.
18. SALVAGE EXISTING BOULDERS FOR PLACEMENT IN THE COBBLE SURFACING.

5 2.5 0 5 VERT.
SCALE: 1"= 5'

20 10 0 20 HORIZ.
SCALE: 1"=20'

Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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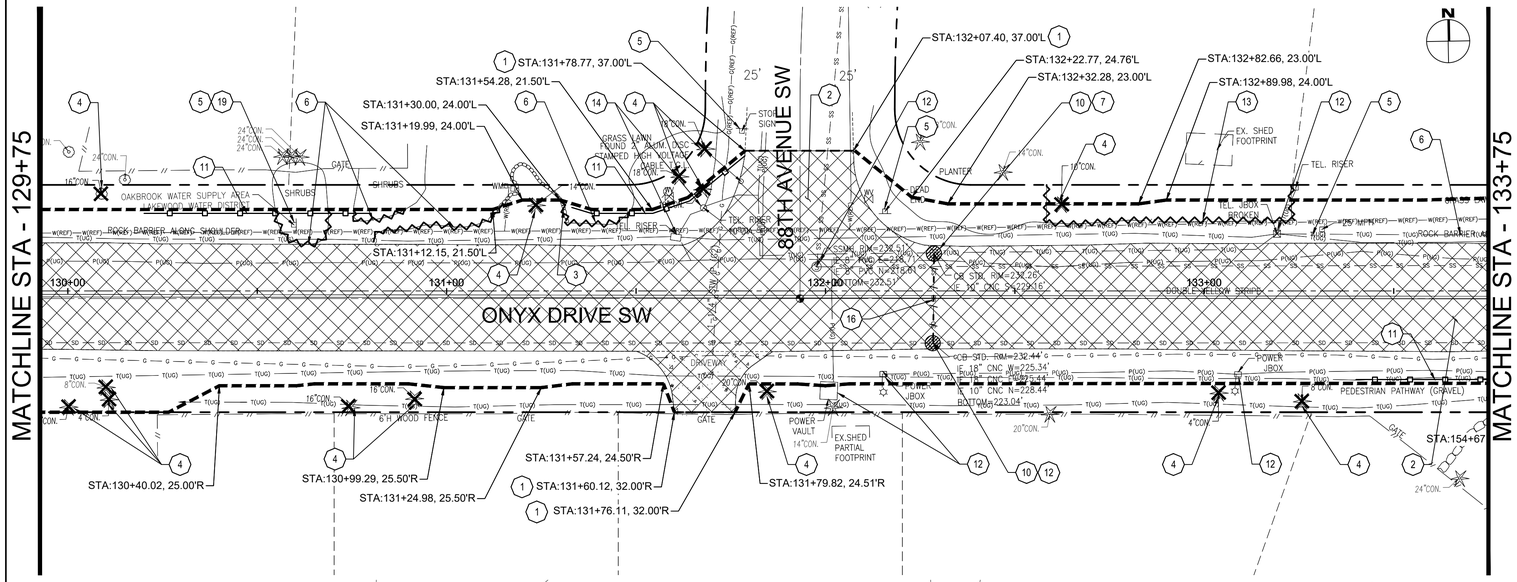
CITY OF LAKEWOOD, WA 1996

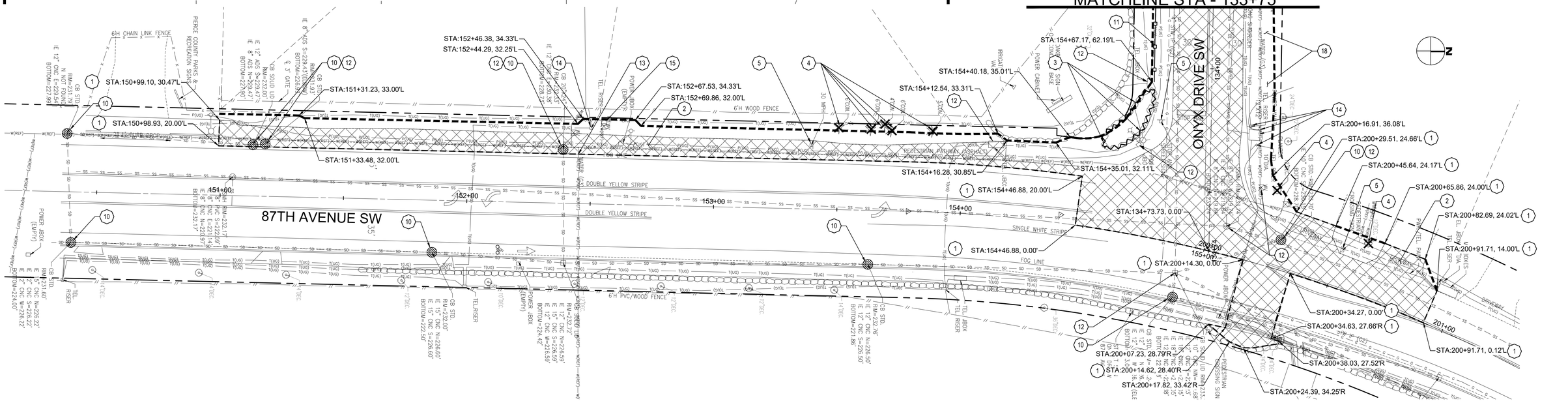
SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER Original

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: SITE PREPERATION PLAN - STA 119+75 TO 129+75

PROJECT: 302.0138
DRAWING: SP3
SHEET: 8 of 64

P:\19000\19046.00.00 - Dnyx Dr Improvements\Civil\07-CAD\BCRA\Production Dwgs\SITE PREP W.dwg 2/12/20





SITE PREPARATION NOTES:

1. SAW CUT A NEAT UNIFORM LINE FULL DEPTH OF EXISTING PAVEMENT.
2. REMOVE EXISTING PAVEMENT.
3. REMOVE EXISTING ROCKERY / WALL.
4. REMOVE EXISTING TREE.
5. PROTECT EXISTING SIGN UNTIL REPLACED. REFER TO PAVEMENT MARKING AND SIGNAGE PLAN.
6. REMOVE EXISTING LANDSCAPING FEATURE.
7. REMOVE EXISTING STRUCTURE.
10. CATCH BASIN INLET PROTECTION PER WSDOT STANDARD PLAN I-40.20-00.
11. SILT FENCE PER WSDOT STANDARD PLAN I-30.15-02.
12. PRESERVE AND PROTECT EXISTING STRUCTURE AND ASSOCIATED LINES.
13. REMOVE EXISTING WOOD FENCE. COORDINATE REMOVAL WITH PROPERTY OWNER.
14. EXISTING UTILITY TO BE RELOCATED BY UTILITY PURVEYOR.
15. EXISTING FIRE HYDRANT TO BE RELOCATED. SEE PLAN AND PROFILE SHEET.
16. REMOVE EXISTING STORM PIPE.
18. SALVAGE EXISTING BOULDERS FOR PLACEMENT IN THE COBBLE SURFACING.
19. SALVAGE EXISTING SIGN FOR REUSE.

SCALE: 1"=20'

Know what's **below.** **Call** before you dig.

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NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

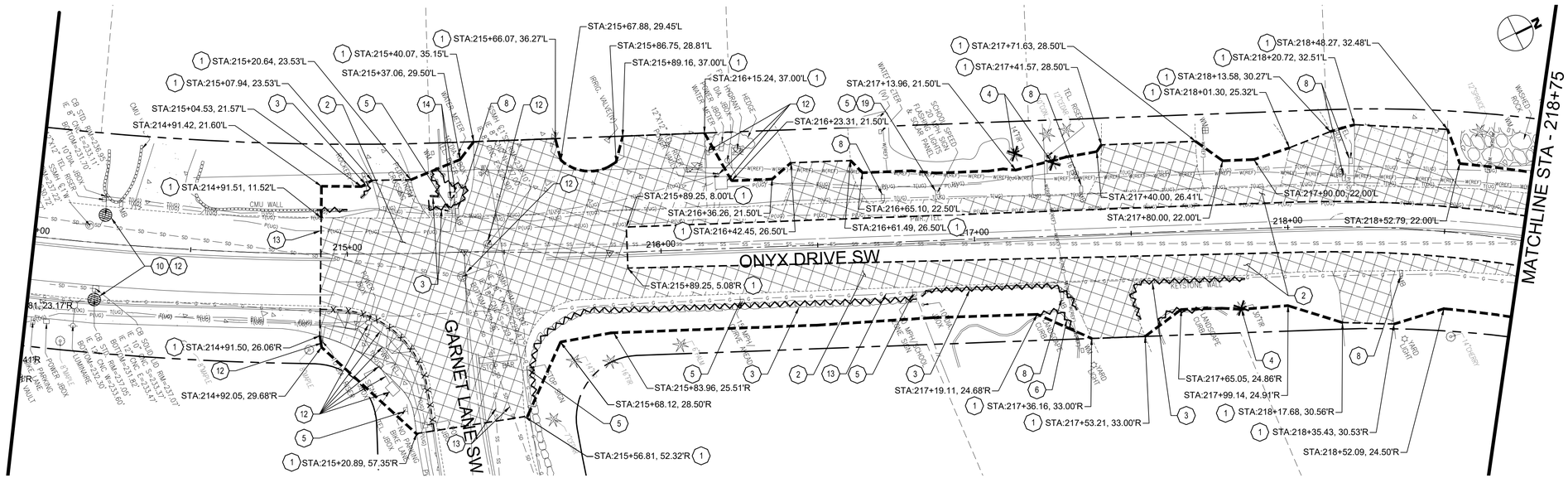
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CITY OF LAKEWOOD, WA 1996

SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: SITE PREPERATION PLAN - STA 129+75 TO 134+74

PROJECT: 302.0138
DRAWING: SP4
SHEET: 9 of 64



SITE PREPARATION NOTES:

1. SAW CUT A NEAT UNIFORM LINE FULL DEPTH OF EXISTING PAVEMENT.
2. REMOVE EXISTING PAVEMENT.
3. REMOVE EXISTING ROCKERY / WALL.
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7. REMOVE EXISTING STRUCTURE.
8. PROTECT EXISTING MAILBOX UNTIL REPLACED. REFER TO ROADWAY PLAN.
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14. EXISTING UTILITY TO BE RELOCATED BY UTILITY PURVEYOR.
16. REMOVE EXISTING STORM PIPE.
18. SALVAGE EXISTING BOULDERS FOR PLACEMENT IN THE COBBLE SURFACING.
19. SALVAGE EXISTING SIGN FOR REUSE.

20 10 0 20

SCALE: 1"=20'

Know what's **below.** **Call** before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

CITY OF LAKEWOOD, WA 1996

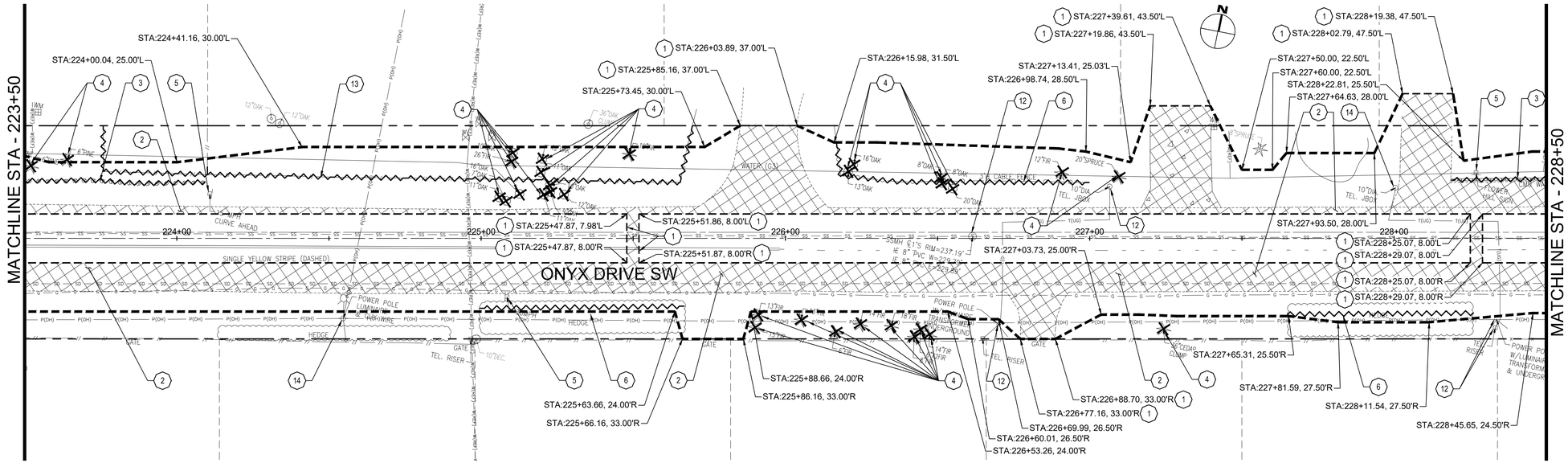
SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS

DRAWING NAME: SITE PREPERATION PLAN - STA 214+00 TO 223+50

PROJECT: 302.0138
DRAWING: SP5
SHEET: 10 of 64

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SITE PREPARATION NOTES:

1. SAW CUT A NEAT UNIFORM LINE FULL DEPTH OF EXISTING PAVEMENT.
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7. REMOVE EXISTING STRUCTURE.
8. PROTECT EXISTING MAILBOX UNTIL REPLACED. REFER TO ROADWAY PLAN.
10. CATCH BASIN INLET PROTECTION PER WSDOT STANDARD PLAN I-40.20-00.
11. SILT FENCE PER WSDOT STANDARD PLAN I-30.15-02.
12. PRESERVE AND PROTECT EXISTING STRUCTURE AND ASSOCIATED LINES.
13. REMOVE EXISTING WOOD FENCE. COORDINATE REMOVAL WITH PROPERTY OWNER.
14. EXISTING UTILITY TO BE RELOCATED BY UTILITY PURVEYOR.
16. REMOVE EXISTING STORM PIPE.

20 10 0 20
SCALE: 1"=20'

Know what's **below.** **Call** before you dig.

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NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

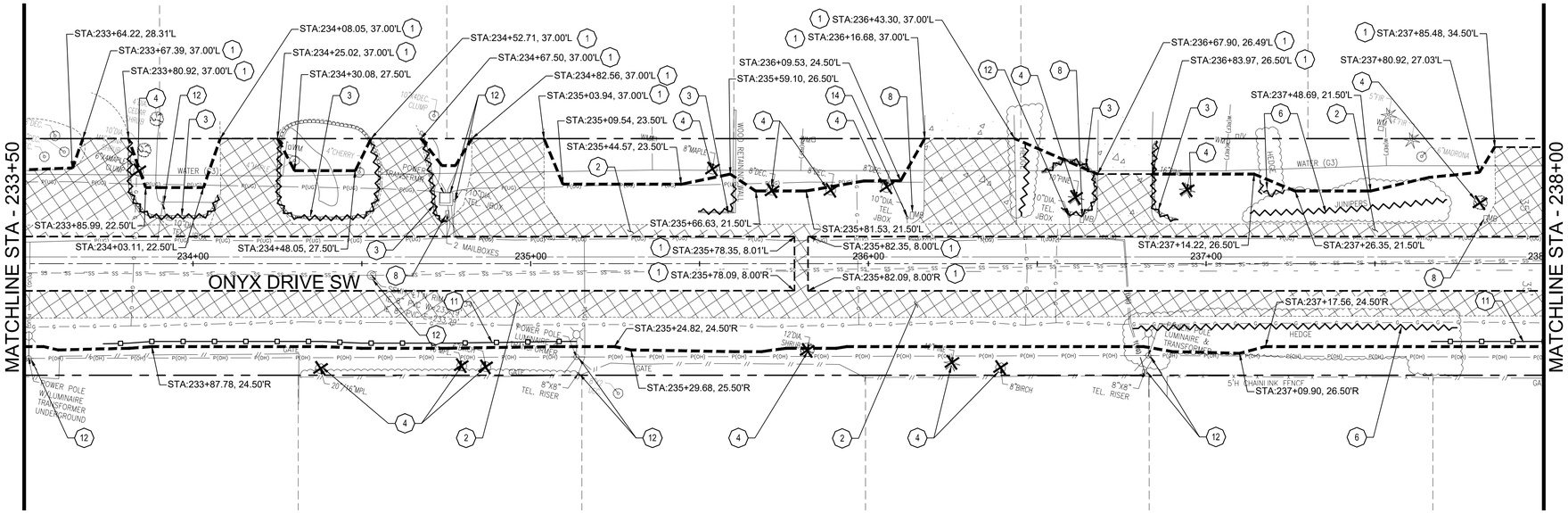
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CITY OF LAKEWOOD, WA 1996

SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: SITE PREPERATION PLAN - STA 223+50 TO 233+50

PROJECT: 302.0138
DRAWING: SP6
SHEET: 11 of 64



SITE PREPARATION NOTES:

1. SAW CUT A NEAT UNIFORM LINE FULL DEPTH OF EXISTING PAVEMENT.
2. REMOVE EXISTING PAVEMENT.
3. REMOVE EXISTING ROCKERY / WALL.
4. REMOVE EXISTING TREE.
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6. REMOVE EXISTING LANDSCAPING FEATURE.
8. PROTECT EXISTING MAILBOX UNTIL REPLACED. REFER TO ROADWAY PLAN.
10. CATCH BASIN INLET PROTECTION PER WSDOT STANDARD PLAN I-40.20-00.
11. SILT FENCE PER WSDOT STANDARD PLAN I-30.15-02.
12. PRESERVE AND PROTECT EXISTING STRUCTURE AND ASSOCIATED LINES.
14. EXISTING UTILITY TO BE RELOCATED BY UTILITY PURVEYOR.

SCALE: 1"=20'

Know what's **below.** **Call** before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

bcra
T 253.627.4367 F 253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

CITY OF LAKEWOOD, WA 1996

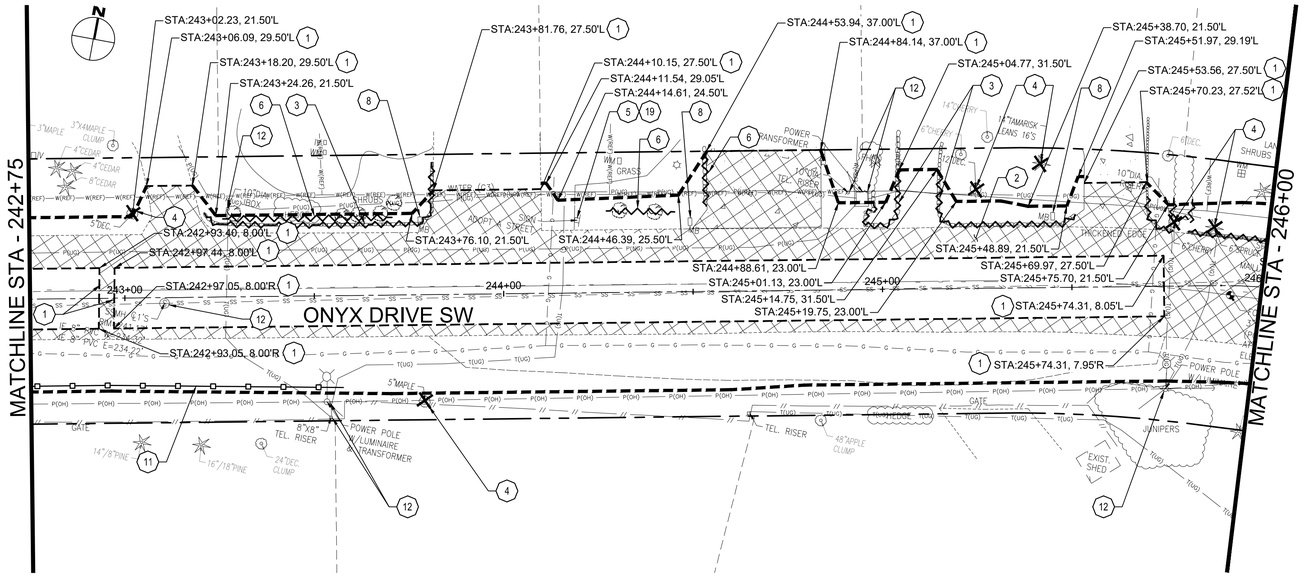
SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS

DRAWING NAME: SITE PREPERATION PLAN - STA 233+50 TO 242+75

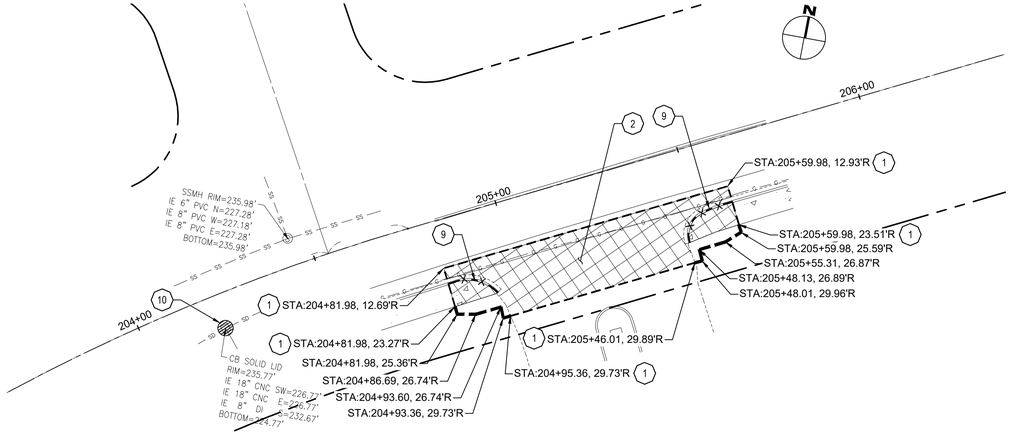
PROJECT: 302.0138
DRAWING: SP7
SHEET: 12 of 64

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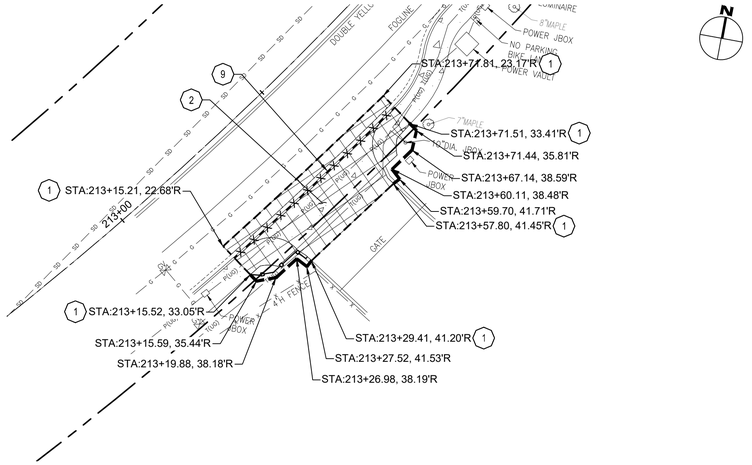
SITE PREPARATION NOTES:

1. SAW CUT A NEAT UNIFORM LINE FULL DEPTH OF EXISTING PAVEMENT.
2. REMOVE EXISTING PAVEMENT.
3. REMOVE EXISTING ROCKERY / WALL.
4. REMOVE EXISTING TREE.
5. PROTECT EXISTING SIGN UNTIL REPLACED. REFER TO PAVEMENT MARKING AND SIGNAGE PLAN.
6. REMOVE EXISTING LANDSCAPING FEATURE.
8. PROTECT EXISTING MAILBOX UNTIL REPLACED. REFER TO ROADWAY PLAN.
9. REMOVE EXISTING CURB AND GUTTER.
10. CATCH BASIN INLET PROTECTION PER WSDOT STANDARD PLAN I-40.20-00.
11. SILT FENCE PER WSDOT STANDARD PLAN I-30.15-02.
12. PRESERVE AND PROTECT EXISTING STRUCTURE AND ASSOCIATED LINES.
19. SALVAGE EXISTING SIGN FOR REUSE.



DRIVEWAY REPLACEMENT AT STA 204+81.98 TO 205+59.98

SCALE: NTS (1)



DRIVEWAY REPLACEMENT AT STA 213+15.21 TO 213+71.81

SCALE: NTS (2)

SCALE: 1"=20'

Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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CITY OF LAKEWOOD, WA 1996

SHANNON MARIE PODGORSKI — STATE OF WASHINGTON — 58052 — REGISTERED PROFESSIONAL ENGINEER

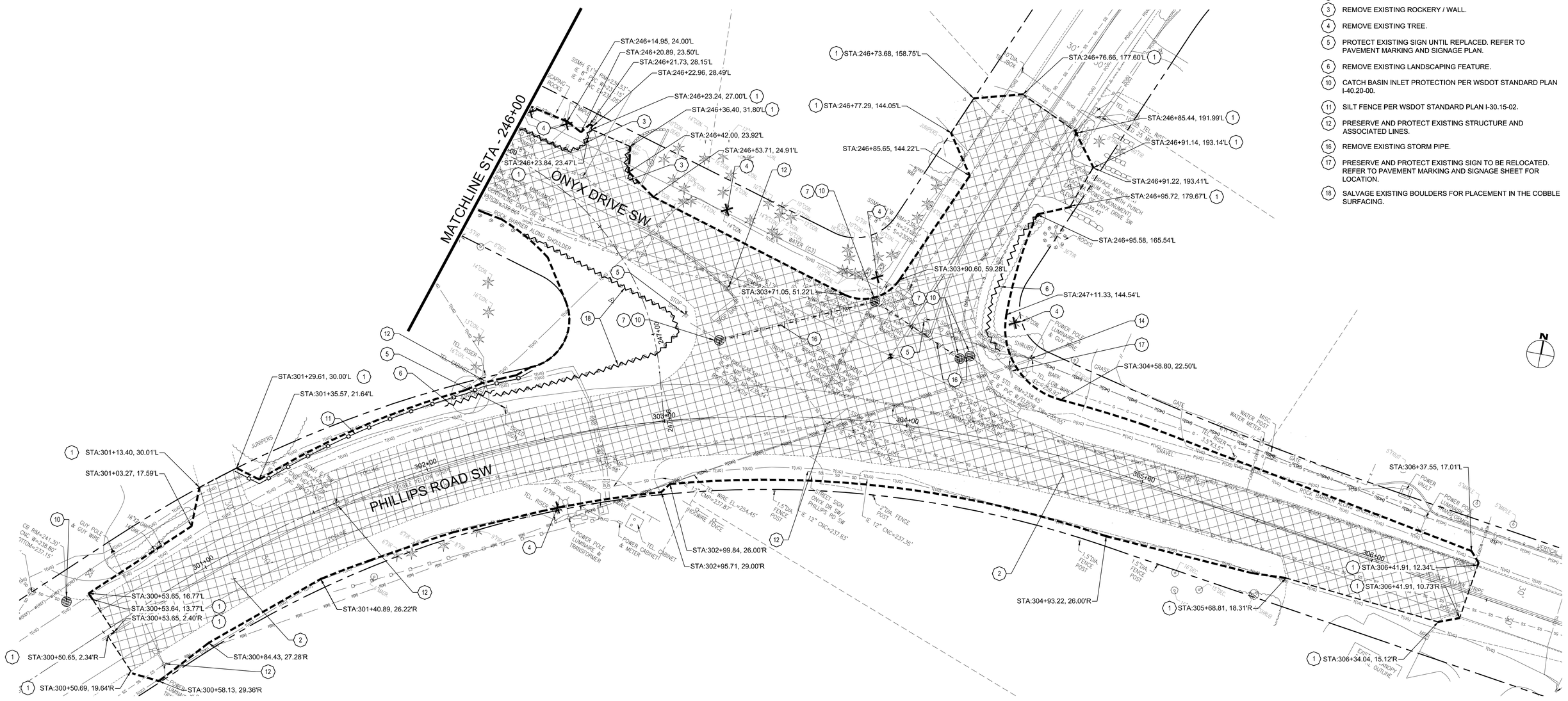
PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: SITE PREPERATION PLAN - STA 241+40 TO 246+00

PROJECT: 302.0138
DRAWING: SP8
SHEET: 13 of 64

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SITE PREPARATION NOTES:

1. SAW CUT A NEAT UNIFORM LINE FULL DEPTH OF EXISTING PAVEMENT.
2. REMOVE EXISTING PAVEMENT.
3. REMOVE EXISTING ROCKERY / WALL.
4. REMOVE EXISTING TREE.
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6. REMOVE EXISTING LANDSCAPING FEATURE.
10. CATCH BASIN INLET PROTECTION PER WSDOT STANDARD PLAN I-40.20-00.
11. SILT FENCE PER WSDOT STANDARD PLAN I-30.15-02.
12. PRESERVE AND PROTECT EXISTING STRUCTURE AND ASSOCIATED LINES.
16. REMOVE EXISTING STORM PIPE.
17. PRESERVE AND PROTECT EXISTING SIGN TO BE RELOCATED. REFER TO PAVEMENT MARKING AND SIGNAGE SHEET FOR LOCATION.
18. SALVAGE EXISTING BOULDERS FOR PLACEMENT IN THE COBBLE SURFACING.



Know what's **below.** **Call** before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

CITY OF LAKEWOOD, WA 1996

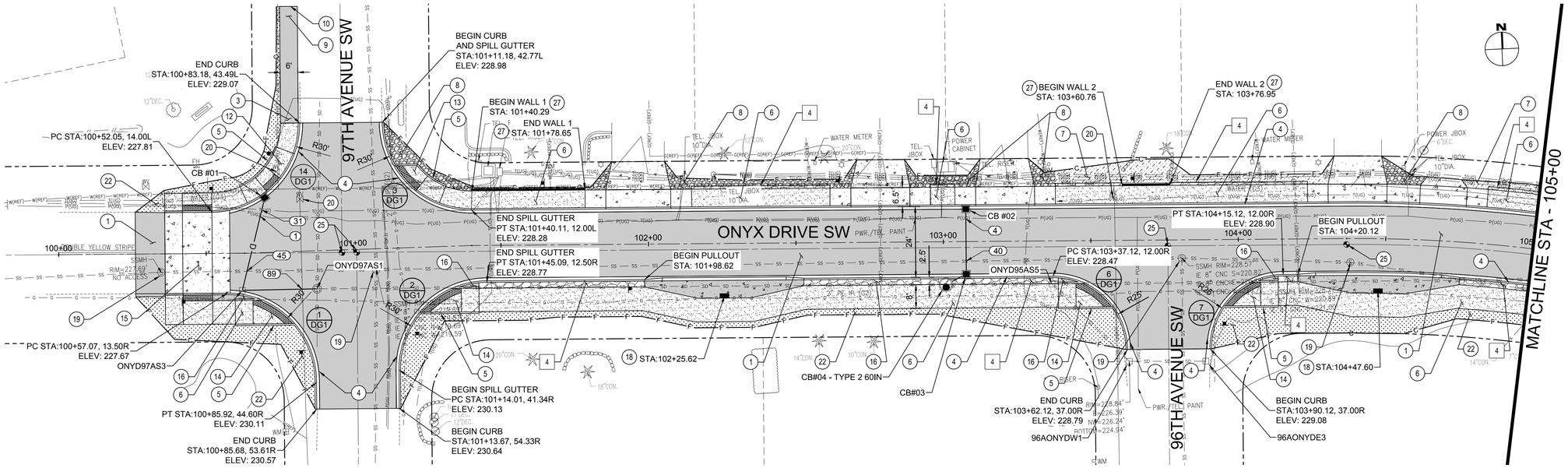
SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

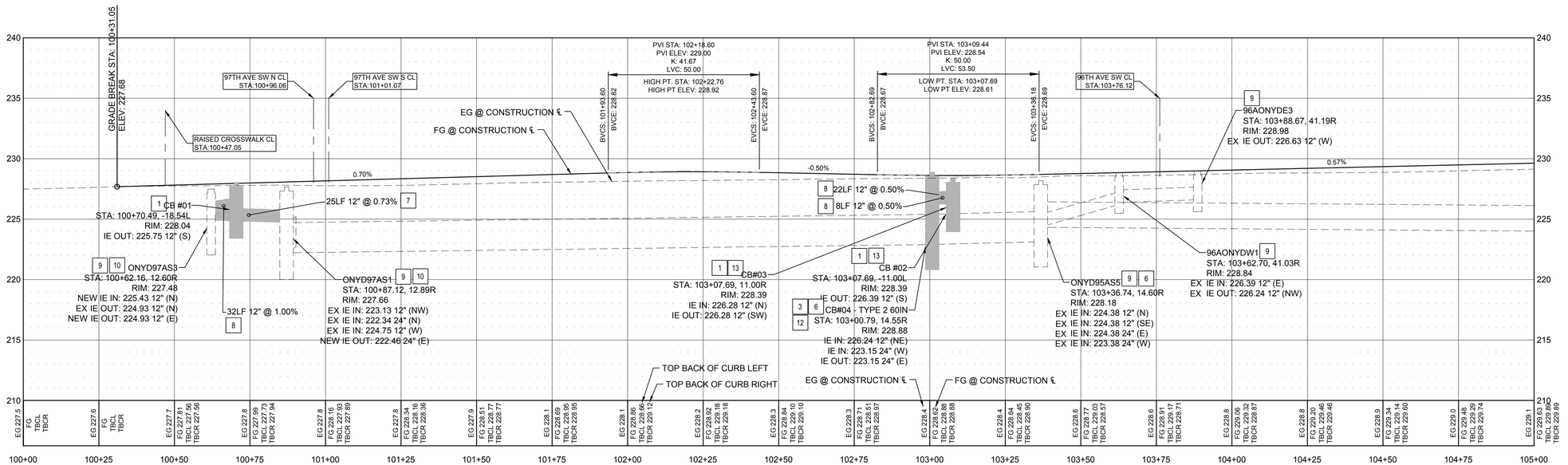
PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS

DRAWING NAME: SITE PREPERATION PLAN - ONYX DR AND PHILLIPS DR INTX

PROJECT: 302.0138
DRAWING: SP9
SHEET: 14 of 64

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CONSTRUCTION NOTES:

1. HMA CL. 1/2" PG 58H-22 PAVEMENT. SEE ROADWAY SECTIONS.
3. HMA RAMP PER DETAIL ON SHEET CD1.
4. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER LAKEWOOD STANDARD PLAN FR-04.
5. CEMENT CONCRETE PEDESTRIAN CURB PER LAKEWOOD STANDARD PLAN FR-04.
6. CEMENT CONCRETE SIDEWALK PER LAKEWOOD STANDARD PLAN FR-03.
7. BARK MULCH - 3" DEPTH.
8. GRAVEL SURFACING - 4" COMPACTED DEPTH CSTC.
9. 2" DEPTH HMA CL. 1/2" PG 58H-22 OVER 4" DEPTH CSTC ASPHALT PATH. CROSS SLOPE OF PATH SHALL NOT EXCEED 1.5%.
10. EXTEND HMA PATH TO CONNECT TO ASHPALT PARKING TO THE NORTH.
12. CEMENT CONCRETE CURB RAMP TYPE PARALLEL A PER WSDOT STANDARD PLAN F-40.12-03. SEE CURB RAMP GRADING SHEETS FOR DETAILED GRADING.
13. CEMENT CONCRETE CURB RAMP TYPE PARALLEL B PER WSDOT STANDARD PLAN F-40.12-03. SEE CURB RAMP GRADING SHEETS FOR DETAILED GRADING.
14. CEMENT CONCRETE CURB RAMP TYPE SINGLE DIRECTION A PER WSDOT STANDARD PLAN F-40.16-03. SEE CURB RAMP GRADING SHEETS FOR DETAILED GRADING.
15. RAISED CROSSWALK PER DETAIL ON SHEET CD1.
16. COLORED CEMENT CONCRETE SIDEWALK.
18. CLUSTER MAILBOX UNIT WITH PULLOUT PER DETAIL ON SHEET CD1. SEE SHEET CD2 FOR CLUSTER MAILBOX TABLE.
19. ADJUST MANHOLE TO FINISH GRADE PER PIERCE COUNTY SEWER STANDARD DETAIL 1002.
20. ADJUST VALVE CASING TO FINISH GRADE PER LAKEWOOD STANDARD PLAN MI-03.
22. SEED, FERTILIZE AND MULCH.
25. MONUMENT CASE AND COVER PER LAKEWOOD STANDARD PLAN MI-02 AT LOCATION OF REMOVED MONUMENT.
27. CAST-IN-PLACE CONCRETE WALL PER DETAIL ON SHEET CD2 AND WALL PROFILE.

STORM DRAINAGE NOTES:

1. CATCH BASIN TYPE 1 PER WSDOT STANDARD PLAN B-5.20-02. FURNISH WITH VANED GRATE PER WSDOT STANDARD PLAN B-30.30-03 UNLESS OTHERWISE NOTED.
3. CATCH BASIN TYPE 2 PER WSDOT STANDARD PLAN B-10.20-02. FURNISH WITH VANED GRATE PER WSDOT STANDARD PLAN B-30.30-03 UNLESS OTHERWISE NOTED.
4. STORMWATER INTERCEPTOR TRENCH PER DETAIL.
6. FURNISH AND INSTALL RECTANGULAR SOLID METAL COVER PER WSDOT STANDARD PLAN B-30.20-04.
7. 12" SCHEDULE A STORM SEWER PIPE.
8. 12" DI STORM SEWER PIPE.
9. ADJUST CATCH BASIN TO FINISH GRADE.
10. CONNECT TO EXISTING CATCH BASIN.
12. INSTALL NEW OVERBUILD STORM STRUCTURE ON EXISTING STORM LINE.
13. FURNISH AND INSTALL BI-DIRECTIONAL VANED GRATE PER WSDOT STANDARD PLAN B-30.40-03.

PIPE CROSSING TABLE

#	UPPER PIPE	INVERT	LOWER PIPE	CROWN	DIFFERENCE
1	STORM	225.66	* EX POWER	224.66	1.00
4	STORM	226.35	* EX POWER	225.28	1.07
31	STORM	225.68	* EX POWER	224.56	1.13
40	STORM	226.28	EX SEWER	221.13	5.14
45	STORM	225.47	EX SEWER	220.13	5.34
89	STORM	224.76	* EX WATER	222.75	2.01

* EXISTING UTILITY DEPTH ASSUMED AT 3' COVER. POTHOLE PRIOR TO CONSTRUCTION TO VERIFY DEPTH AND LOCATION.

DRIVEWAY TABLE

CL STA	TYPE	WIDTH	UP STA RAMP L	DOWN STA RAMP L	APPROACH L	APPROACH MATERIAL
101+96.68	1	22'	7'	7'	9.5'	CONC.
102+78.76	1	20'	7'	7'	9.5'	CONC.
103+21.06	1	20'	7'	7'	9.5'	CONC.
104+40.43	1	20'	7'	SEE NOTE 4	9.5'	CONC.
104+68.72	1	16'	SEE NOTE 4	7'	9.5'	CONC.

DRIVEWAY NOTES:
1. HMA APPROACH PER DETAIL ON SHEET CD2.
2. CEMENT CONC. APPROACH PER DETAIL ON SHEET CD2.
3. DRIVEWAY TYPE 1,3, OR 4 PER WSDOT STD PLAN F-80. 10-04
4. MAINTAIN DEPRESSED CURB BETWEEN DRIVEWAYS

2 5 0 5 VERT.
SCALE: 1"= 5'
20 10 0 20 HORIZ.
SCALE: 1"=20'

Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: JAMES BENTON DORT
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

bcra
T 253.627.4367 F 253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

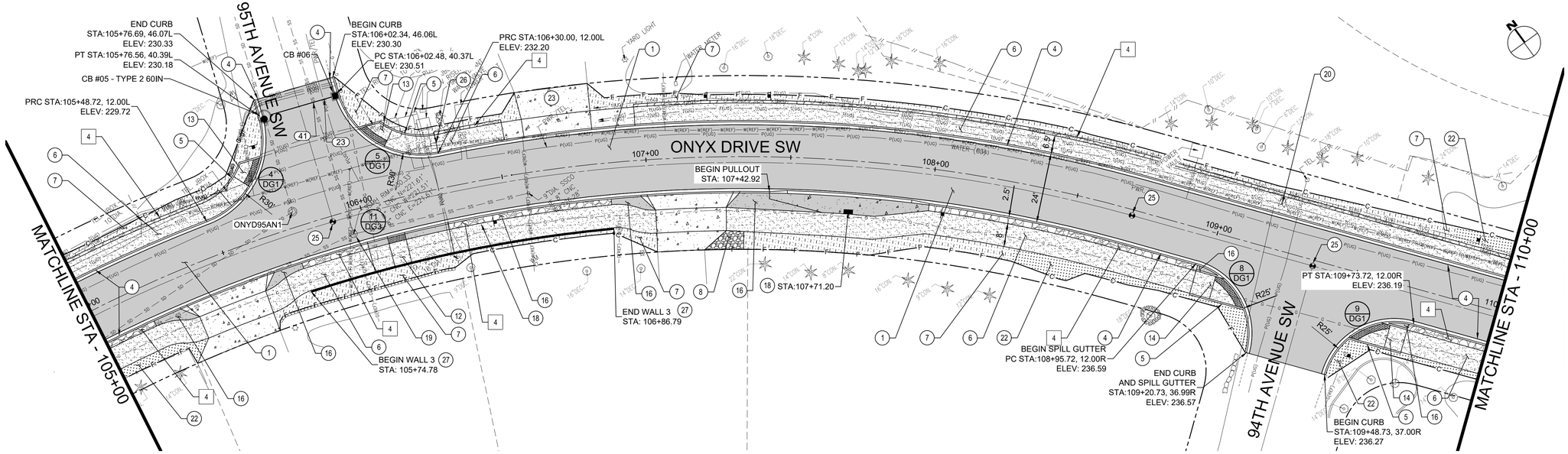
CITY OF LAKEWOOD, WA 1996

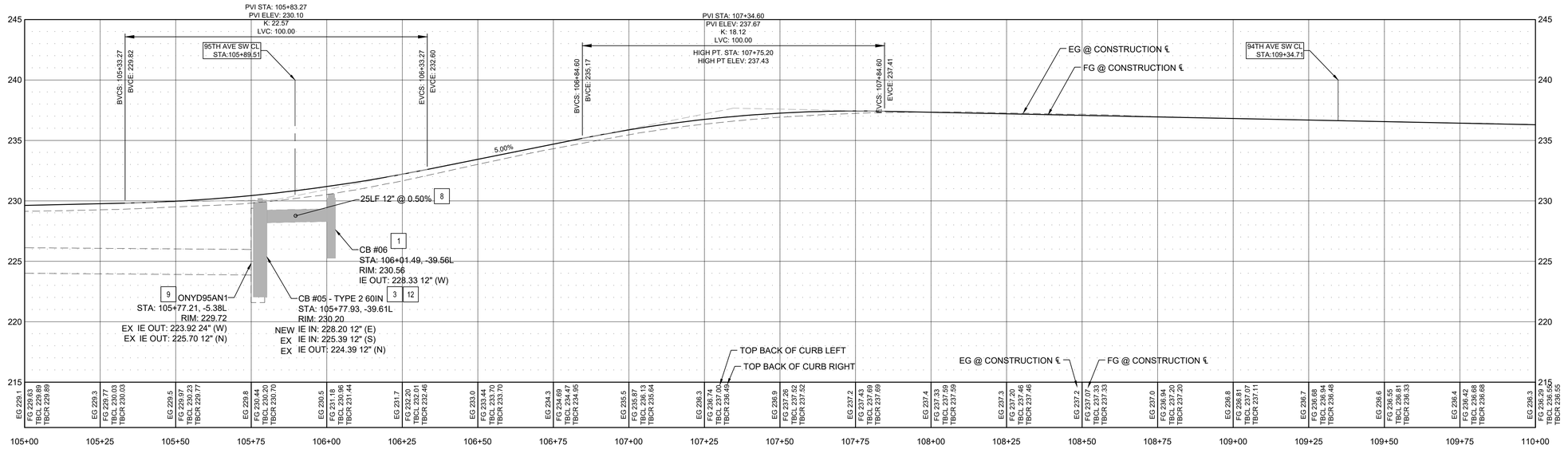
SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: ROADWAY PLAN AND PROFILE - STA 100+00 TO 105+00

PROJECT 302.0138
DRAWING PP1
SHEET 15 of 64

\\jupiter\projects\19000\19046.00.00 - Onyx Dr Improvements\Civil\07-CAD\BCRA\production Dwgs\ROADWAY PLAN AND PROFILE WEST - STA 130+00 TO 134+74.dwg 2/13/20





CONSTRUCTION NOTES:

1. HMA CL. 1/2" PG 58H-22 PAVEMENT. SEE ROADWAY SECTIONS.
4. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER LAKEWOOD STANDARD PLAN FR-04.
5. CEMENT CONCRETE PEDESTRIAN CURB PER LAKEWOOD STANDARD PLAN FR-04.
6. CEMENT CONCRETE SIDEWALK PER LAKEWOOD STANDARD PLAN FR-03.
7. BARK MULCH - 3" DEPTH.
8. GRAVEL SURFACING - 4" COMPACTED DEPTH CSTC.
12. CEMENT CONCRETE CURB RAMP TYPE PARALLEL A PER WSDOT STANDARD PLAN F-40.12-03. SEE CURB RAMP GRADING SHEETS FOR DETAILED GRADING.
13. CEMENT CONCRETE CURB RAMP TYPE PARALLEL B PER WSDOT STANDARD PLAN F-40.12-03. SEE CURB RAMP GRADING SHEETS FOR DETAILED GRADING.
14. CEMENT CONCRETE CURB RAMP TYPE SINGLE DIRECTION A PER WSDOT STANDARD PLAN F-40.16-03. SEE CURB RAMP GRADING SHEETS FOR DETAILED GRADING.
16. COLORED CEMENT CONCRETE SIDEWALK.
18. CLUSTER MAILBOX UNIT WITH PULLOUT PER DETAIL ON SHEET CD1. SEE SHEET CD2 FOR CLUSTER MAILBOX TABLE.
19. ADJUST MANHOLE TO FINISH GRADE PER PIERCE COUNTY SEWER STANDARD DETAIL 1002.
20. ADJUST VALVE CASING TO FINISH GRADE PER LAKEWOOD STANDARD PLAN MI-03.
22. SEED, FERTILIZE AND MULCH.
23. GRADE DRIVEWAY AWAY FROM ROADWAY AT 1.5%. PROVIDE ¼" LIP ON DEPRESSED CURB TO CHANNELIZE FLOW ACROSS DRIVEWAY.
25. MONUMENT CASE AND COVER PER LAKEWOOD STANDARD PLAN MI-02 AT LOCATION OF REMOVED MONUMENT.
26. ADJUST JUNCTION BOX TO FINISH GRADE. COORDINATE WORK WITH UTILITY PURVEYOR.
27. CAST-IN-PLACE CONCRETE WALL PER DETAIL ON SHEET CD2 AND WALL PROFILE.

STORM DRAINAGE NOTES:

1. CATCH BASIN TYPE 1 PER WSDOT STANDARD PLAN B-5.20-02. FURNISH WITH VANED GRATE PER WSDOT STANDARD PLAN B-30.30-03 UNLESS OTHERWISE NOTED.
3. CATCH BASIN TYPE 2 PER WSDOT STANDARD PLAN B-10.20-02. FURNISH WITH VANED GRATE PER WSDOT STANDARD PLAN B-30.30-03 UNLESS OTHERWISE NOTED.
4. STORMWATER INTERCEPTOR TRENCH PER DETAIL.
8. 12" DI STORM SEWER PIPE.
9. ADJUST CATCH BASIN TO FINISH GRADE.
12. INSTALL NEW OVERBUILD STORM STRUCTURE ON EXISTING STORM LINE.

PIPE CROSSING TABLE

#	UPPER PIPE	INVERT	LOWER PIPE	CROWN	DIFFERENCE
23	STORM	228.52	* EX POWER	227.04	1.48
41	STORM	228.50	EX SEWER	222.59	5.91

* EXISTING UTILITY DEPTH ASSUMED AT 3' COVER. POTHOLE PRIOR TO CONSTRUCTION TO VERIFY DEPTH AND LOCATION.

DRIVEWAY TABLE

CL STA	TYPE	WIDTH	UP STA RAMP L	DOWN STA RAMP L	APPROACH L	APPROACH MATERIAL
105+46.71	3	24'	-	-	6.5'	CONC.
106+70.97	1	24'	7'	15'	9.3'	CONC.
107+14.85	3	24'	-	-	6.5'	CONC.

DRIVEWAY NOTES:

1. HMA APPROACH PER DETAIL ON SHEET CD2.
2. CEMENT CONC. APPROACH PER DETAIL ON SHEET CD2.
3. DRIVEWAY TYPE 1,3, OR 4 PER WSDOT STD PLAN F-80. 10-04
4. MAINTAIN DEPRESSED CURB BETWEEN DRIVEWAYS

5 2.5 0 5 VERT.
SCALE: 1"= 5'

20 10 0 20 HORIZ.
SCALE: 1"=20'

Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

bcra
T 253.627.4367 F 253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

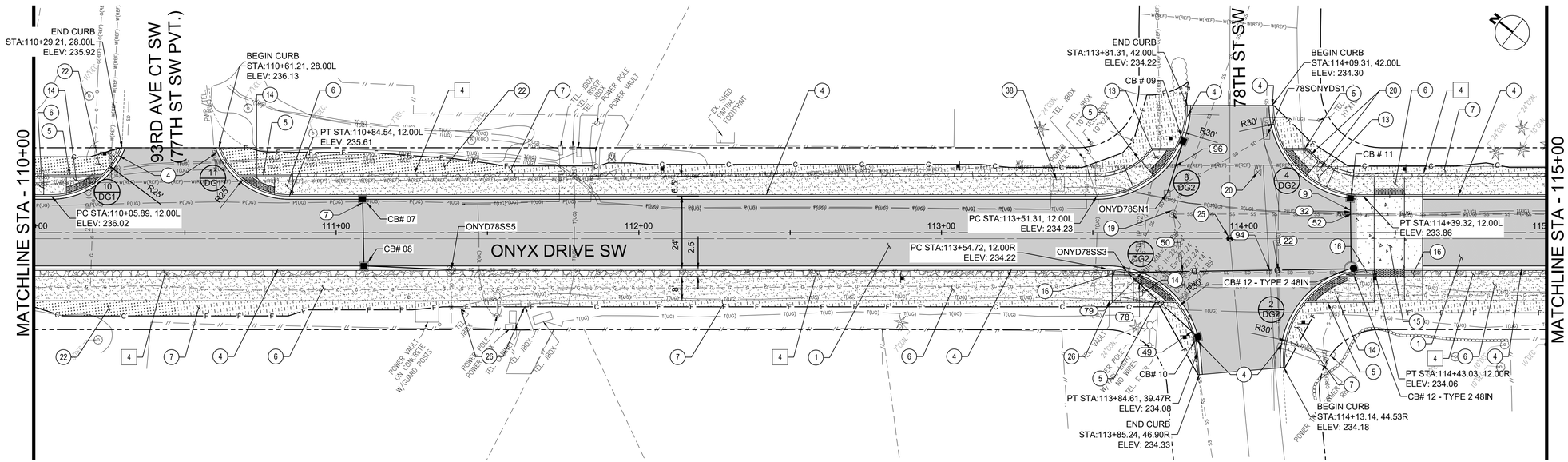
CITY OF LAKEWOOD, WA 1996

SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: ROADWAY PLAN AND PROFILE - STA 105+00 TO 110+00

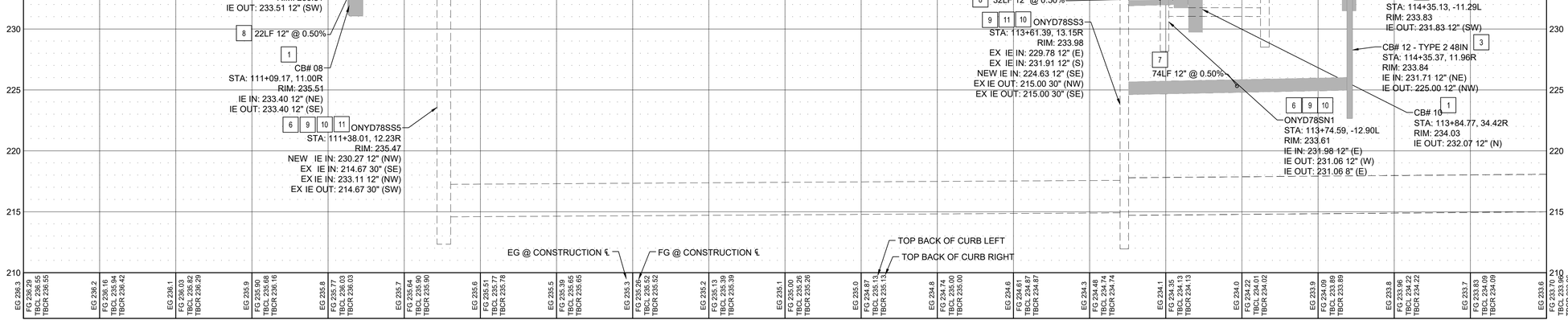
PROJECT 302.0138
DRAWING PP2
SHEET 16 of 64

P:\19000\19046.00.00 - Onyx Dr Improvements\Civil\07-CAD\BCRA\Production Dwgs\RDABWAY PLAN AND PROFILE WEST - STA 130+00 TO 134+74.dwg 2/13/20



CONSTRUCTION NOTES:

1. HMA CL. 1/2" PG 58H-22 PAVEMENT. SEE ROADWAY SECTIONS.
4. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER LAKEWOOD STANDARD PLAN FR-04.
5. CEMENT CONCRETE PEDESTRIAN CURB PER LAKEWOOD STANDARD PLAN FR-04.
6. CEMENT CONCRETE SIDEWALK PER LAKEWOOD STANDARD PLAN FR-03.
7. BARK MULCH - 3" DEPTH.
13. CEMENT CONCRETE CURB RAMP TYPE PARALLEL B PER WSDOT STANDARD PLAN F-40.12-03. SEE CURB RAMP GRADING SHEETS FOR DETAILED GRADING.
14. CEMENT CONCRETE CURB RAMP TYPE SINGLE DIRECTION A PER WSDOT STANDARD PLAN F-40.16-03. SEE CURB RAMP GRADING SHEETS FOR DETAILED GRADING.
15. RAISED CROSSWALK PER DETAIL ON SHEET CD1.
16. COLORED CEMENT CONCRETE SIDEWALK.
19. ADJUST MANHOLE TO FINISH GRADE PER PIERCE COUNTY SEWER STANDARD DETAIL 1002.
20. ADJUST VALVE CASING TO FINISH GRADE PER LAKEWOOD STANDARD PLAN MI-03.
22. SEED, FERTILIZE AND MULCH.
25. MONUMENT CASE AND COVER PER LAKEWOOD STANDARD PLAN MI-02 AT LOCATION OF REMOVED MONUMENT.
26. ADJUST JUNCTION BOX TO FINISH GRADE. COORDINATE WORK WITH UTILITY PURVEYOR.
38. ADJUST LID TO FINISH GRADE AND REPLACE WITH ADA NONSKID LID. COORDINATE WORK WITH UTILITY PURVEYOR.



STORM DRAINAGE NOTES:

1. CATCH BASIN TYPE 1 PER WSDOT STANDARD PLAN B-5.20-02. FURNISH WITH VANED GRATE PER WSDOT STANDARD PLAN B-30.30-03 UNLESS OTHERWISE NOTED.
3. CATCH BASIN TYPE 2 PER WSDOT STANDARD PLAN B-10.20-02. FURNISH WITH VANED GRATE PER WSDOT STANDARD PLAN B-30.30-03 UNLESS OTHERWISE NOTED.
4. STORMWATER INTERCEPTOR TRENCH PER DETAIL.
7. 12" SCHEDULE A STORM SEWER PIPE.
8. 12" DI STORM SEWER PIPE.
9. ADJUST CATCH BASIN TO FINISH GRADE.
10. CONNECT TO EXISTING CATCH BASIN.
11. ROTATE CONE OF EXISTING STRUCTURE TO PLACE FRAME IN PROPOSED FLOW LINE. INSTALL NEW LADDER OR STEPS AT NEW ACCESS LOCATION.
13. FURNISH AND INSTALL BI-DIRECTIONAL VANED GRATE PER WSDOT STANDARD PLAN B-30.40-03.

PIPE CROSSING TABLE

#	UPPER PIPE	INVERT	LOWER PIPE	CROWN	DIFFERENCE
7	STORM	233.48	* EX POWER	232.65	0.83
9	STORM	231.79	* EX POWER	230.31	1.47
22	* EX POWER	230.68	STORM	225.90	4.77
32	STORM	231.78	* EX POWER	230.50	1.28
49	STORM	232.03	EX SEWER	227.58	4.46
50	EX SEWER	227.04	STORM	225.74	1.30
50	EX SEWER	227.04	STORM	225.74	1.30
52	STORM	231.78	EX SEWER	227.58	4.20
78	STORM	231.92	* EX GAS	231.16	0.75
79	* EX GAS	230.76	STORM	225.68	5.08
94	* EX WATER	229.22	STORM	225.89	3.33
96	STORM	232.00	* EX WATER	229.56	2.45

* EXISTING UTILITY DEPTH ASSUMED AT 3' COVER. POTHOLE PRIOR TO CONSTRUCTION TO VERIFY DEPTH AND LOCATION.

5 2.5 0 5 VERT.
SCALE: 1"= 5'
20 10 0 20 HORIZ.
SCALE: 1"=20'

Know what's **below.** **Call** before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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T 253.627.4367 F 253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

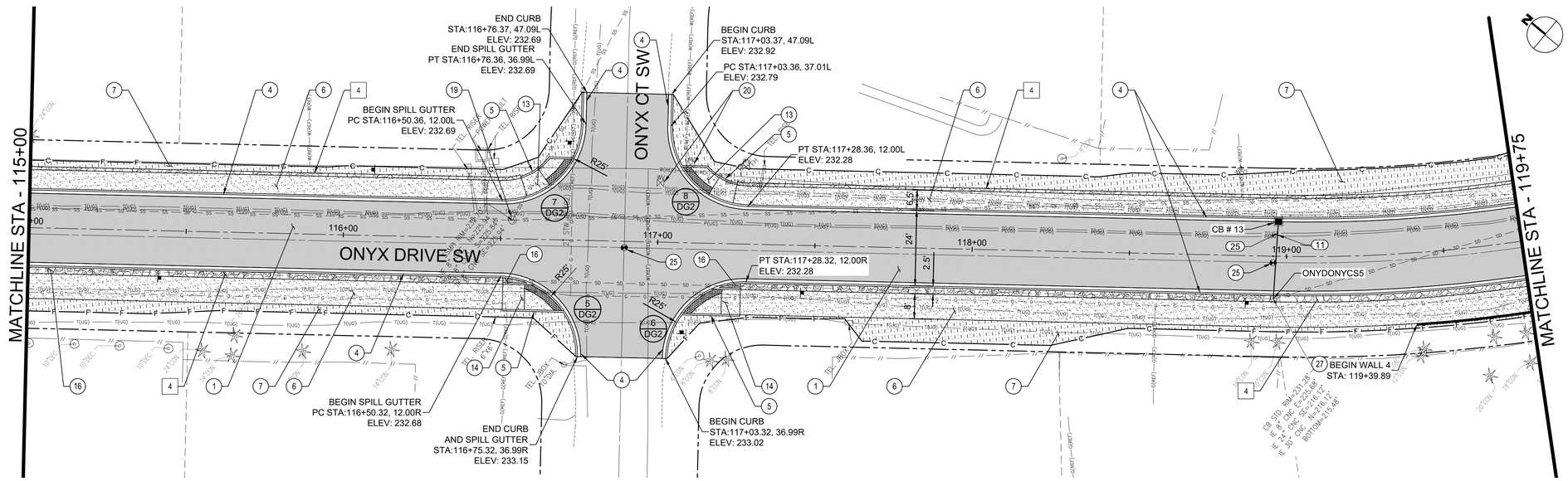
CITY OF LAKEWOOD, WA 1996

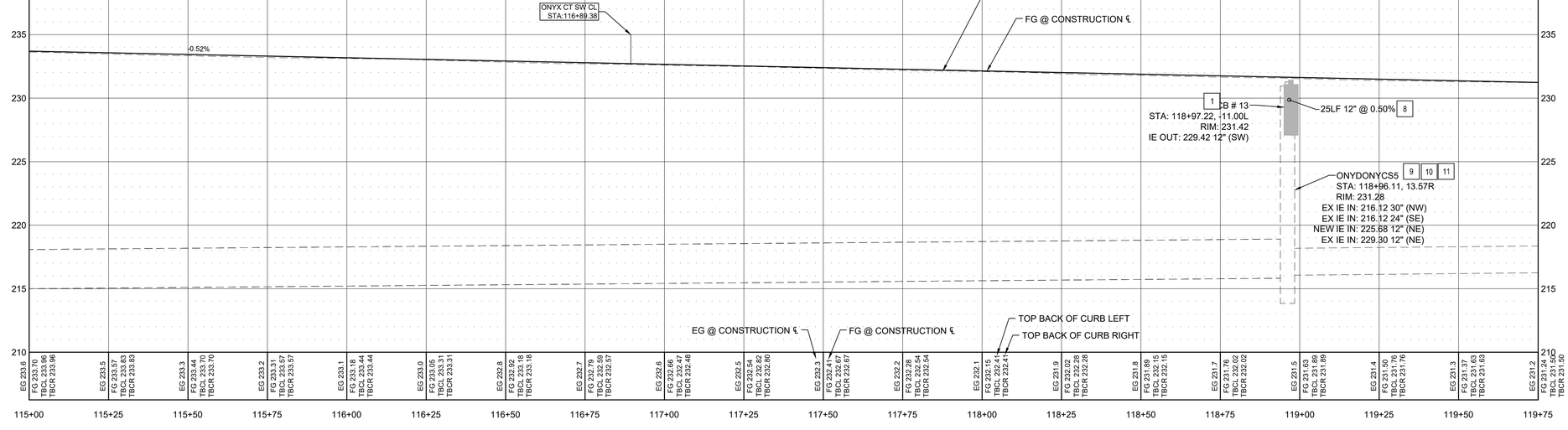
SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: ROADWAY PLAN AND PROFILE - STA 110+00 TO 115+00

PROJECT: 302.0138
DRAWING: PP3
SHEET: 17 of 64

P:\19000\19046.00.00 - Onyx Dr Improvements\Civil\07-CAD\BCRA\Production Dwgs\ROADWAY PLAN AND PROFILE WEST - STA 130+00 TO 134+74.dwg 2/13/20





CONSTRUCTION NOTES:

1. HMA CL. 1/2" PG 58H-22 PAVEMENT. SEE ROADWAY SECTIONS.
4. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER LAKEWOOD STANDARD PLAN FR-04.
5. CEMENT CONCRETE PEDESTRIAN CURB PER LAKEWOOD STANDARD PLAN FR-04.
6. CEMENT CONCRETE SIDEWALK PER LAKEWOOD STANDARD PLAN FR-03.
7. BARK MULCH - 3" DEPTH.
13. CEMENT CONCRETE CURB RAMP TYPE PARALLEL B PER WSDOT STANDARD PLAN F-40.12-03. SEE CURB RAMP GRADING SHEETS FOR DETAILED GRADING.
14. CEMENT CONCRETE CURB RAMP TYPE SINGLE DIRECTION A PER WSDOT STANDARD PLAN F-40.16-03. SEE CURB RAMP GRADING SHEETS FOR DETAILED GRADING.
16. COLORED CEMENT CONCRETE SIDEWALK.
19. ADJUST MANHOLE TO FINISH GRADE PER PIERCE COUNTY SEWER STANDARD DETAIL 1002.
20. ADJUST VALVE CASING TO FINISH GRADE PER LAKEWOOD STANDARD PLAN MI-03.
25. MONUMENT CASE AND COVER PER LAKEWOOD STANDARD PLAN MI-02 AT LOCATION OF REMOVED MONUMENT.
27. CAST-IN-PLACE CONCRETE WALL PER DETAIL ON SHEET CD2 AND WALL PROFILE.

STORM DRAINAGE NOTES:

1. CATCH BASIN TYPE 1 PER WSDOT STANDARD PLAN B-5.20-02. FURNISH WITH VANED GRATE PER WSDOT STANDARD PLAN B-30.30-03 UNLESS OTHERWISE NOTED.
4. STORMWATER INTERCEPTOR TRENCH PER DETAIL.
7. 12" SCHEDULE A STORM SEWER PIPE.
8. 12" DI STORM SEWER PIPE.
9. ADJUST CATCH BASIN TO FINISH GRADE.
10. CONNECT TO EXISTING CATCH BASIN.
11. ROTATE CONE OF EXISTING STRUCTURE TO PLACE FRAME IN PROPOSED FLOW LINE. INSTALL NEW LADDER OR STEPS AT NEW ACCESS LOCATION.

PIPE CROSSING TABLE

#	UPPER PIPE	INVERT	LOWER PIPE	CROWN	DIFFERENCE
11	STORM	229.38	* EX POWER	228.32	1.05
25	STORM	229.38	* EX POWER	228.34	1.04

* EXISTING UTILITY DEPTH ASSUMED AT 3' COVER. POTHOLE PRIOR TO CONSTRUCTION TO VERIFY DEPTH AND LOCATION.

5 2.5 0 5 VERT.
SCALE: 1"= 5'

20 10 0 20 HORIZ.
SCALE: 1"=20'

Know what's **below.** **Call** before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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T 253.627.4367 F 253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

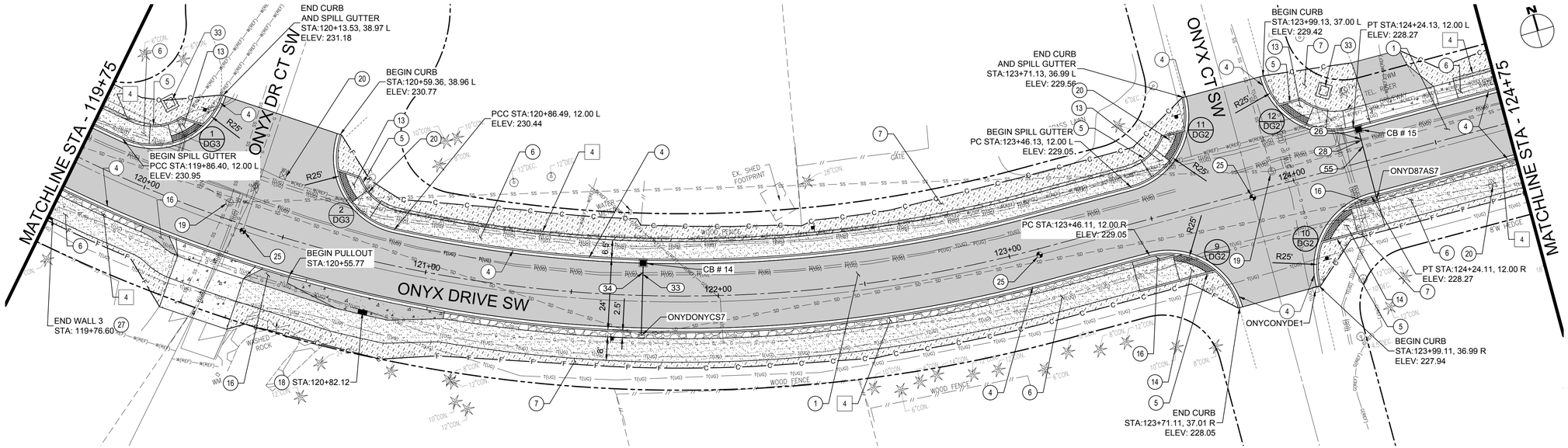
CITY OF LAKEWOOD, WA 1996

SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: ROADWAY PLAN AND PROFILE - STA 115+00 TO 119+75

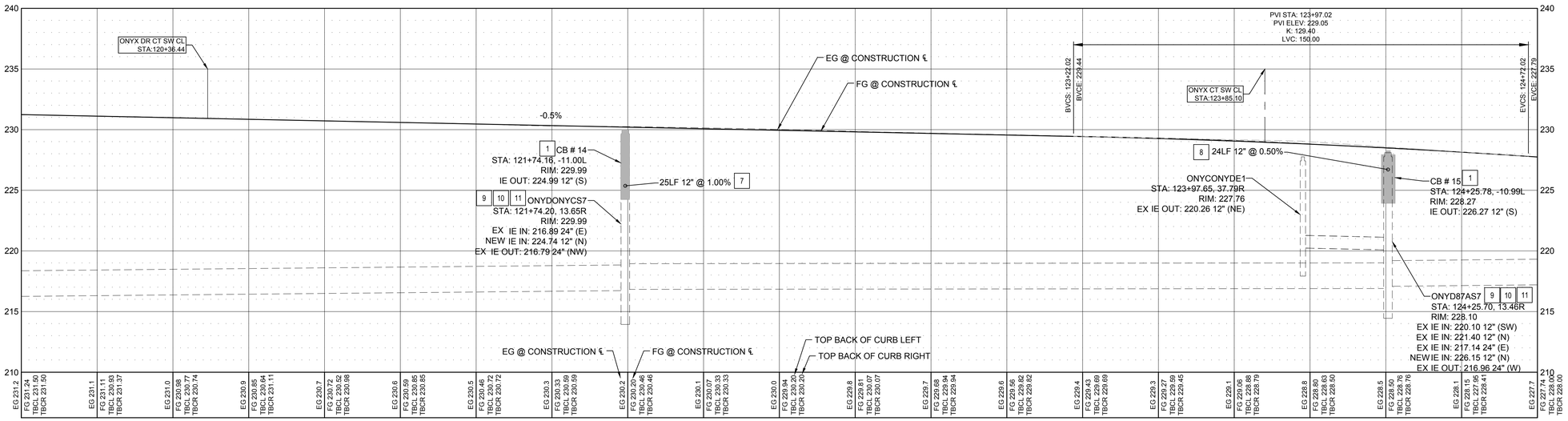
PROJECT 302.0138
DRAWING PP4
SHEET 18 of 64

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CONSTRUCTION NOTES:

1. HMA CL. 1/2" PG 58H-22 PAVEMENT. SEE ROADWAY SECTIONS.
4. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER LAKEWOOD STANDARD PLAN FR-04.
5. CEMENT CONCRETE PEDESTRIAN CURB PER LAKEWOOD STANDARD PLAN FR-04.
6. CEMENT CONCRETE SIDEWALK PER LAKEWOOD STANDARD PLAN FR-03.
7. BARK MULCH - 3" DEPTH.
9. 2" DEPTH HMA CL. 1/2" PG 58H-22 OVER 4" DEPTH CSTC ASPHALT PATH. CROSS SLOPE OF PATH SHALL NOT EXCEED 1.5%.
13. CEMENT CONCRETE CURB RAMP TYPE PARALLEL B PER WSDOT STANDARD PLAN F-40.12-03. SEE CURB RAMP GRADING SHEETS FOR DETAILED GRADING.
14. CEMENT CONCRETE CURB RAMP TYPE SINGLE DIRECTION A PER WSDOT STANDARD PLAN F-40.16-03. SEE CURB RAMP GRADING SHEETS FOR DETAILED GRADING.
16. COLORED CEMENT CONCRETE SIDEWALK.
18. CLUSTER MAILBOX UNIT WITH PULLOUT PER DETAIL ON SHEET CD1. SEE SHEET CD2 FOR CLUSTER MAILBOX TABLE.
19. ADJUST MANHOLE TO FINISH GRADE PER PIERCE COUNTY SEWER STANDARD DETAIL 1002.
20. ADJUST VALVE CASING TO FINISH GRADE PER LAKEWOOD STANDARD PLAN MI-03.
25. MONUMENT CASE AND COVER PER LAKEWOOD STANDARD PLAN MI-02 AT LOCATION OF REMOVED MONUMENT.
27. CAST-IN-PLACE CONCRETE WALL PER DETAIL ON SHEET CD2 AND WALL PROFILE.
33. PROPOSED POWER VAULT, EXACT LOCATION TO BE DETERMINED AND INSTALLATION TO BE COMPLETED BY TACOMA POWER.



STORM DRAINAGE NOTES:

1. CATCH BASIN TYPE 1 PER WSDOT STANDARD PLAN B-5.20-02. FURNISH WITH VANED GRATE PER WSDOT STANDARD PLAN B-30.30-03 UNLESS OTHERWISE NOTED.
4. STORMWATER INTERCEPTOR TRENCH PER DETAIL.
7. 12" SCHEDULE A STORM SEWER PIPE.
9. ADJUST CATCH BASIN TO FINISH GRADE.
10. CONNECT TO EXISTING CATCH BASIN.
11. ROTATE CONE OF EXISTING STRUCTURE TO PLACE FRAME IN PROPOSED FLOW LINE. INSTALL NEW LADDER OR STEPS AT NEW ACCESS LOCATION.

PIPE CROSSING TABLE

#	UPPER PIPE	INVERT	LOWER PIPE	CROWN	DIFFERENCE
26	STORM	226.23	* EX POWER	224.34	1.89
28	STORM	226.23	* EX POWER	224.87	1.36
33	* EX POWER	226.99	STORM	225.98	1.02
34	* EX POWER	227.07	STORM	225.98	1.09
55	STORM	226.22	EX SEWER	222.55	3.67

* EXISTING UTILITY DEPTH ASSUMED AT 3' COVER. POTHOLE PRIOR TO CONSTRUCTION TO VERIFY DEPTH AND LOCATION.

DRIVEWAY TABLE

CL STA	TYPE	WIDTH	UP STA RAMP L	DOWN STA RAMP L	APPROACH L	APPROACH MATERIAL
120+30.19	3	24'	-	-	6.5'	CONC.
124+42.27	1	24'	8'	7'	9.5'	HMA

DRIVEWAY NOTES:
1. HMA APPROACH PER DETAIL ON SHEET CD2.
2. CEMENT CONC. APPROACH PER DETAIL ON SHEET CD2.
3. DRIVEWAY TYPE 1,3, OR 4 PER WSDOT STD PLAN F-80. 10-04
4. MAINTAIN DEPRESSED CURB BETWEEN DRIVEWAYS

5 2.5 0 5 VERT.
SCALE: 1"= 5'
20 10 0 20 HORIZ.
SCALE: 1"=20'

Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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T 253.627.4367 F 253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

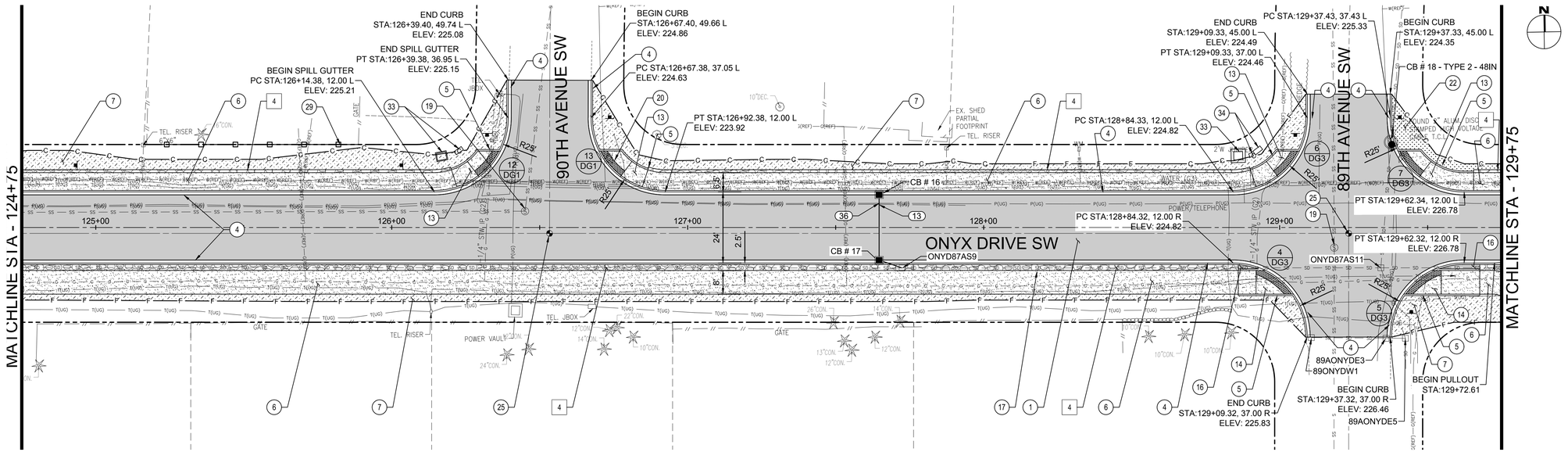
CITY OF LAKEWOOD, WA 1996

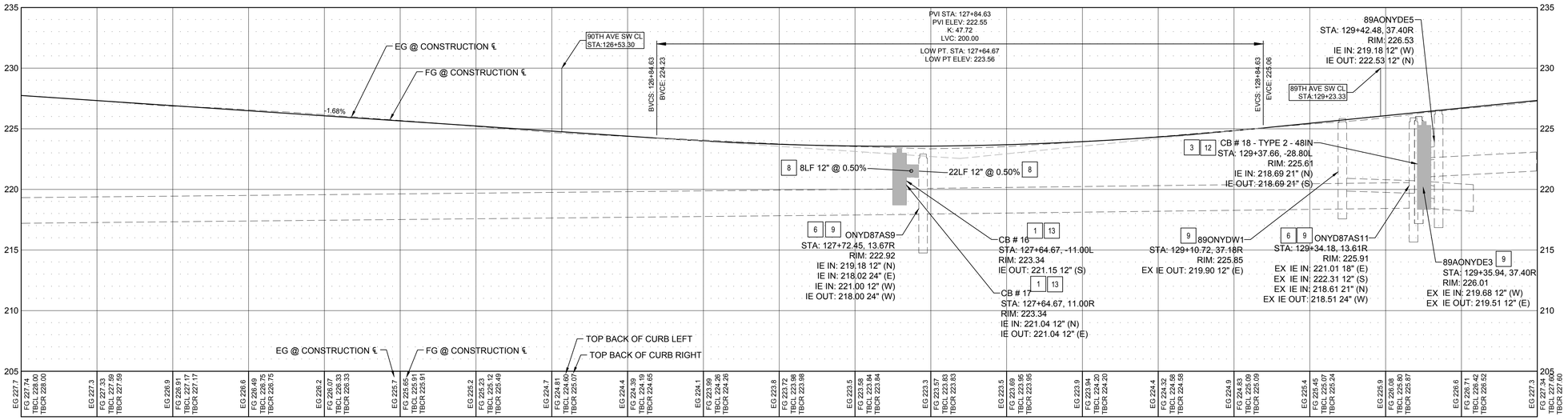
SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: ROADWAY PLAN AND PROFILE - STA 119+75 TO 124+75

PROJECT 302.0138
DRAWING PP5
SHEET 19 of 64

\\Jupiter\projects\19000\19046.00.00 - Onyx Dr Improvements\Civil\07-CAD\BCRA\production Dwgs\19046C RDAD-PLPR_5-7.dwg 2/13/20





CONSTRUCTION NOTES:

1. HMA CL. 1/2" PG 58H-22 PAVEMENT. SEE ROADWAY SECTIONS.
4. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER LAKEWOOD STANDARD PLAN FR-04.
5. CEMENT CONCRETE PEDESTRIAN CURB PER LAKEWOOD STANDARD PLAN FR-04.
6. CEMENT CONCRETE SIDEWALK PER LAKEWOOD STANDARD PLAN FR-03.
7. BARK MULCH - 3" DEPTH.
13. CEMENT CONCRETE CURB RAMP TYPE PARALLEL B PER WSDOT STANDARD PLAN F-40.12-03. SEE CURB RAMP GRADING SHEETS FOR DETAILED GRADING.
14. CEMENT CONCRETE CURB RAMP TYPE SINGLE DIRECTION A PER WSDOT STANDARD PLAN F-40.16-03. SEE CURB RAMP GRADING SHEETS FOR DETAILED GRADING.
19. ADJUST MANHOLE TO FINISH GRADE PER PIERCE COUNTY SEWER STANDARD DETAIL 1002.
20. ADJUST VALVE CASING TO FINISH GRADE PER LAKEWOOD STANDARD PLAN MI-03.
22. SEED, FERTILIZE AND MULCH.
25. MONUMENT CASE AND COVER PER LAKEWOOD STANDARD PLAN MI-02 AT LOCATION OF REMOVED MONUMENT.
29. 6' WOOD FENCE. LOCATE AT R/W AND TIE-IN EXISTING.
33. PROPOSED POWER VAULT, EXACT LOCATION TO BE DETERMINED AND INSTALLATION TO BE COMPLETED BY TACOMA POWER.
34. RELOCATED COMMUNICATION EQUIPMENT, EXACT LOCATION TO BE DETERMINED AND INSTALLATION TO BE COMPLETED BY UTILITY PURVEYOR.

STORM DRAINAGE NOTES:

1. CATCH BASIN TYPE 1 PER WSDOT STANDARD PLAN B-5.20-02. FURNISH WITH VANED GRATE PER WSDOT STANDARD PLAN B-30.30-03 UNLESS OTHERWISE NOTED.
3. CATCH BASIN TYPE 2 PER WSDOT STANDARD PLAN B-10.20-02. FURNISH WITH VANED GRATE PER WSDOT STANDARD PLAN B-30.30-03 UNLESS OTHERWISE NOTED.
4. STORMWATER INTERCEPTOR TRENCH PER DETAIL.
6. FURNISH AND INSTALL RECTANGULAR SOLID METAL COVER PER WSDOT STANDARD PLAN B-30.20-04.
9. ADJUST CATCH BASIN TO FINISH GRADE.
10. CONNECT TO EXISTING CATCH BASIN.
12. INSTALL NEW OVERBUILD STORM STRUCTURE ON EXISTING STORM LINE.
13. FURNISH AND INSTALL BI-DIRECTIONAL VANED GRATE PER WSDOT STANDARD PLAN B-30.40-03.

PIPE CROSSING TABLE

#	UPPER PIPE	INVERT	LOWER PIPE	CROWN	DIFFERENCE
13	STORM	221.11	* EX POWER	220.31	0.80
36	STORM	221.11	* EX POWER	220.37	0.75

* EXISTING UTILITY DEPTH ASSUMED AT 3' COVER. POTHOLE PRIOR TO CONSTRUCTION TO VERIFY DEPTH AND LOCATION.

5 2.5 0 5 VERT.
SCALE: 1"= 5'

20 10 0 20 HORIZ.
SCALE: 1"=20'

Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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T 253.627.4367 F 253.627.4395 WWW.BCRADESIGN.COM
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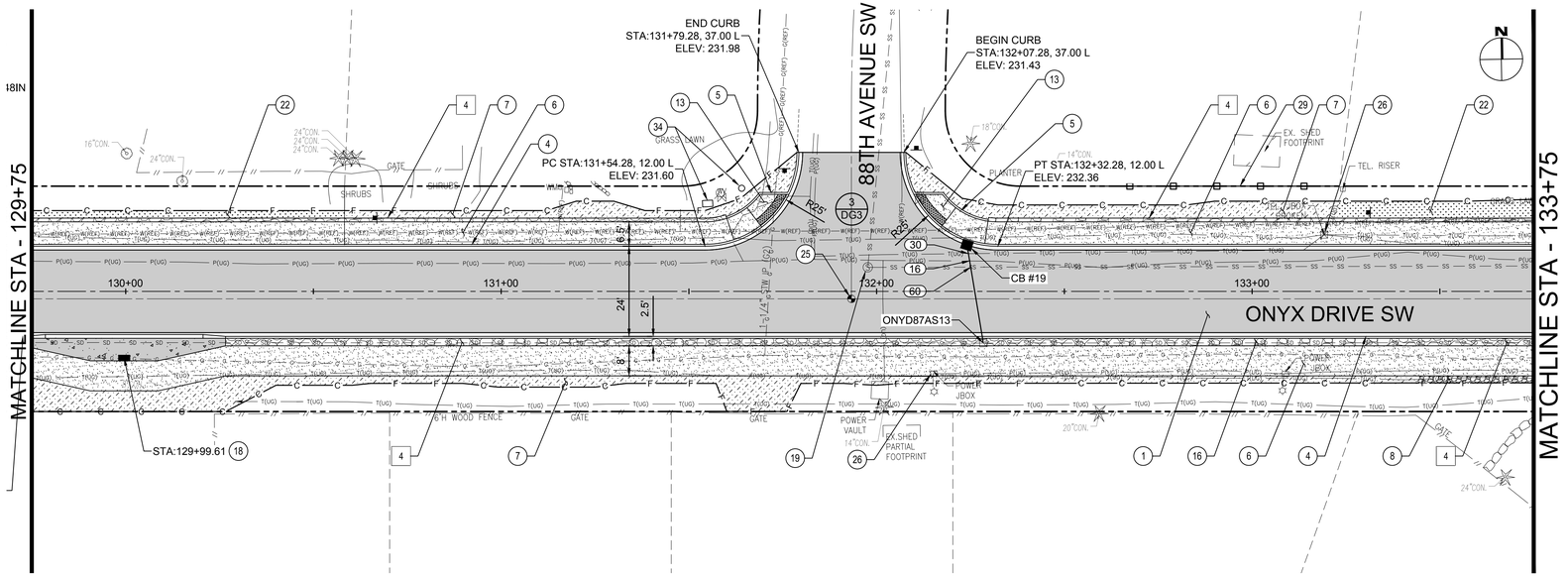
CITY OF LAKEWOOD, WA 1996

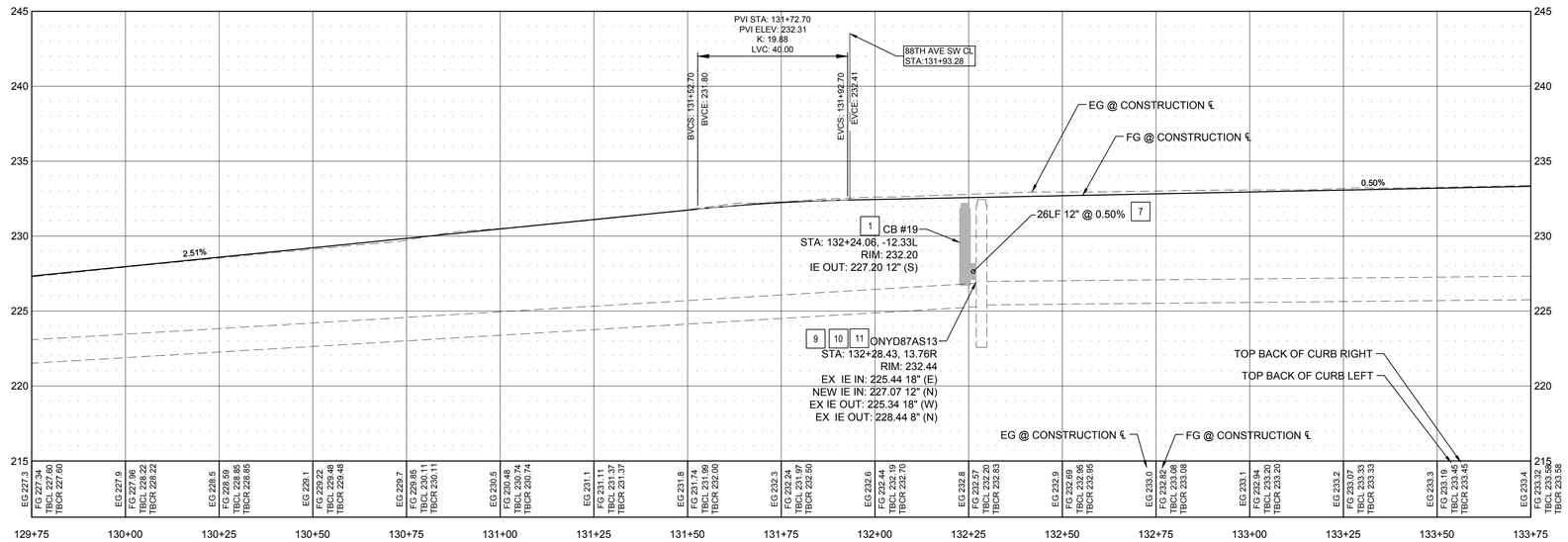
SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: ROADWAY PLAN AND PROFILE - STA 124+75 TO 129+75

PROJECT: 302.0138
DRAWING: PP6
SHEET: 20 of 64

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CONSTRUCTION NOTES:

1. HMA CL. 1/2" PG 58H-22 PAVEMENT. SEE ROADWAY SECTIONS.
4. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER LAKEWOOD STANDARD PLAN FR-04.
5. CEMENT CONCRETE PEDESTRIAN CURB PER LAKEWOOD STANDARD PLAN FR-04.
6. CEMENT CONCRETE SIDEWALK PER LAKEWOOD STANDARD PLAN FR-03.
7. BARK MULCH - 3" DEPTH.
8. GRAVEL SURFACING - 4" COMPACTED DEPTH CSTC.
12. CEMENT CONCRETE CURB RAMP TYPE PARALLEL A PER WSDOT STANDARD PLAN F-40.12-03. SEE CURB RAMP GRADING SHEETS FOR DETAILED GRADING.
13. CEMENT CONCRETE CURB RAMP TYPE PARALLEL B PER WSDOT STANDARD PLAN F-40.12-03. SEE CURB RAMP GRADING SHEETS FOR DETAILED GRADING.
16. COLORED CEMENT CONCRETE SIDEWALK.
18. CLUSTER MAILBOX UNIT WITH PULLOUT PER DETAIL ON SHEET CD1. SEE SHEET CD2 FOR CLUSTER MAILBOX TABLE.
19. ADJUST MANHOLE TO FINISH GRADE PER PIERCE COUNTY SEWER STANDARD DETAIL 1002.
20. ADJUST VALVE CASING TO FINISH GRADE PER LAKEWOOD STANDARD PLAN MI-03.
21. COBBLE SURFACING PER DETAIL ON SHEET CD1.
22. SEED, FERTILIZE AND MULCH.
25. MONUMENT CASE AND COVER PER LAKEWOOD STANDARD PLAN MI-02 AT LOCATION OF REMOVED MONUMENT.
26. ADJUST JUNCTION BOX TO FINISH GRADE. COORDINATE WORK WITH UTILITY PURVEYOR.
29. 6' WOOD FENCE. LOCATE AT R/W AND TIE-IN EXISTING.
33. PROPOSED POWER VAULT, EXACT LOCATION TO BE DETERMINED AND INSTALLATION TO BE COMPLETED BY TACOMA POWER.
34. RELOCATED COMMUNICATION EQUIPMENT, EXACT LOCATION TO BE DETERMINED AND INSTALLATION TO BE COMPLETED BY UTILITY PURVEYOR.

STORM DRAINAGE NOTES:

1. CATCH BASIN TYPE 1 PER WSDOT STANDARD PLAN B-5.20-02. FURNISH WITH VANED GRATE PER WSDOT STANDARD PLAN B-30.30-03 UNLESS OTHERWISE NOTED.
4. STORMWATER INTERCEPTOR TRENCH PER DETAIL.
7. 12" SCHEDULE A STORM SEWER PIPE.
9. ADJUST CATCH BASIN TO FINISH GRADE.
10. CONNECT TO EXISTING CATCH BASIN.
11. ROTATE CONE OF EXISTING STRUCTURE TO PLACE FRAME IN PROPOSED FLOW LINE. INSTALL NEW LADDER OR STEPS AT NEW ACCESS LOCATION.

PIPE CROSSING TABLE

#	UPPER PIPE	INVERT	LOWER PIPE	CROWN	DIFFERENCE
16	* EX POWER	229.21	STORM	228.20	1.01
30	* EX POWER	229.48	STORM	228.21	1.27
60	STORM	227.15	EX SEWER	219.51	7.64

* EXISTING UTILITY DEPTH ASSUMED AT 3' COVER. POTHOLE PRIOR TO CONSTRUCTION TO VERIFY DEPTH AND LOCATION.

5 2.5 0 5 VERT.
SCALE: 1"= 5'

20 10 0 20 HORIZ.
SCALE: 1"=20'

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NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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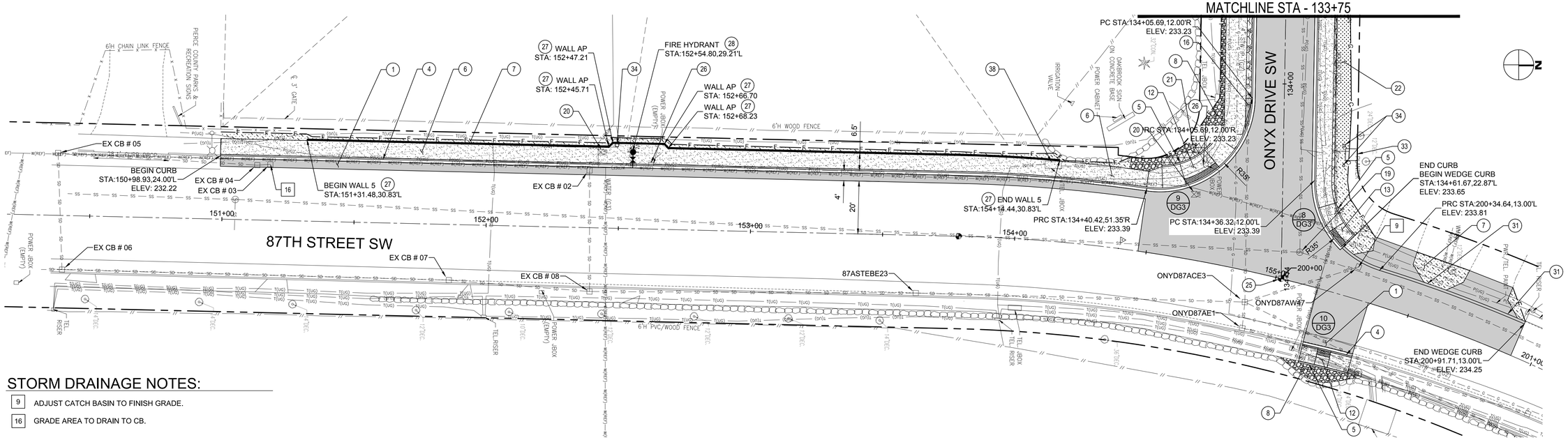
CITY OF LAKEWOOD, WA 1996

SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: ROADWAY PLAN AND PROFILE - STA 129+75 TO 134+74

PROJECT: 302.0138
DRAWING: PP7
SHEET: 21 of 64

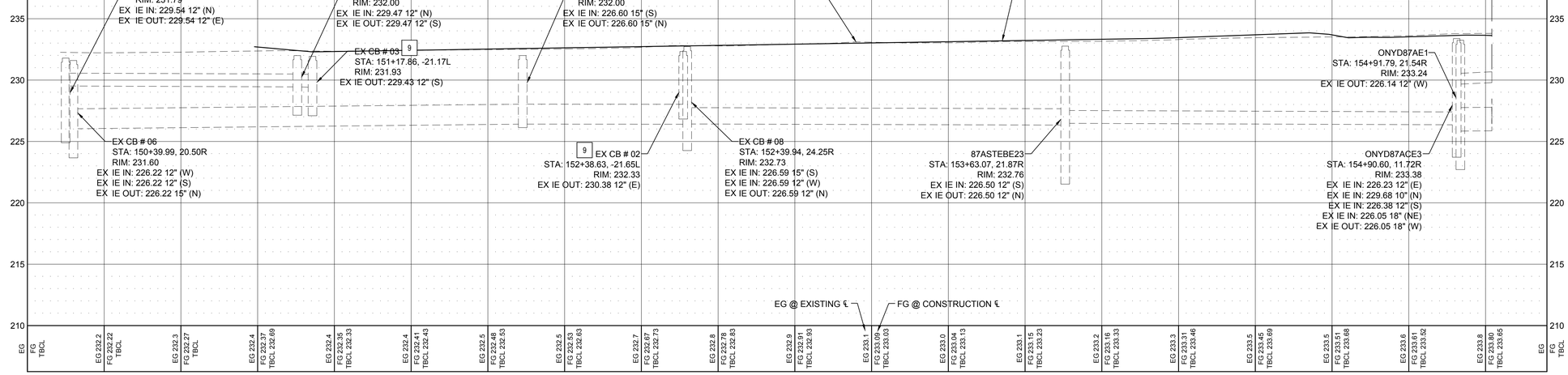
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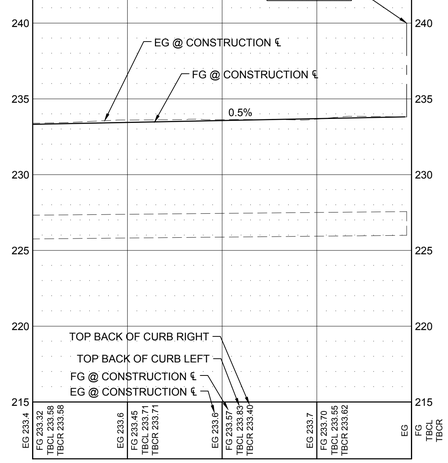


STORM DRAINAGE NOTES:

9 ADJUST CATCH BASIN TO FINISH GRADE.

16 GRADE AREA TO DRAIN TO CB.





CONSTRUCTION NOTES:

1. HMA CL. 1/2" PG 58H-22 PAVEMENT. SEE ROADWAY SECTIONS.
4. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER LAKEWOOD STANDARD PLAN FR-04.
5. CEMENT CONCRETE PEDESTRIAN CURB PER LAKEWOOD STANDARD PLAN FR-04.
6. CEMENT CONCRETE SIDEWALK PER LAKEWOOD STANDARD PLAN FR-03.
7. BARK MULCH - 3" DEPTH.
8. GRAVEL SURFACING - 4" COMPACTED DEPTH CSTC.
12. CEMENT CONCRETE CURB RAMP TYPE PARALLEL A PER WSDOT STANDARD PLAN F-40.12-03. SEE CURB RAMP GRADING SHEETS FOR DETAILED GRADING.
13. CEMENT CONCRETE CURB RAMP TYPE PARALLEL B PER WSDOT STANDARD PLAN F-40.12-03. SEE CURB RAMP GRADING SHEETS FOR DETAILED GRADING.
19. ADJUST MANHOLE TO FINISH GRADE PER PIERCE COUNTY SEWER STANDARD DETAIL 1002.
20. ADJUST VALVE CASING TO FINISH GRADE PER LAKEWOOD STANDARD PLAN MI-03.
21. COBBLE SURFACING PER DETAIL ON SHEET CD1.
22. SEED, FERTILIZE AND MULCH.
26. ADJUST JUNCTION BOX TO FINISH GRADE. COORDINATE WORK WITH UTILITY PURVEYOR.
27. CAST-IN-PLACE CONCRETE WALL PER DETAIL ON SHEET CD2 AND WALL PROFILE.
28. RELOCATE EXISTING FIRE HYDRANT.
31. HMA WEDGE CURB PER LAKEWOOD STANDARD PLAN FR-04.
33. PROPOSED POWER VAULT, EXACT LOCATION TO BE DETERMINED AND INSTALLATION TO BE COMPLETED BY TACOMA POWER.
34. RELOCATED COMMUNICATION EQUIPMENT, EXACT LOCATION TO BE DETERMINED AND INSTALLATION TO BE COMPLETED BY UTILITY PURVEYOR.
38. ADJUST LID TO FINISH GRADE AND REPLACE WITH ADA NONSKID LID. COORDINATE WORK WITH UTILITY PURVEYOR.

DRIVEWAY TABLE

CL STA	TYPE	WIDTH	UP STA RAMP L	DOWN STA RAMP L	APPROACH L	APPROACH MATERIAL
200+37.98	4	16'	-	-	10'	HMA
200+74.42	4	18'	-	-	10'	HMA

DRIVEWAY NOTES:
1. HMA APPROACH PER DETAIL ON SHEET CD2.
2. CEMENT CONC. APPROACH PER DETAIL ON SHEET CD2.
3. DRIVEWAY TYPE 1,3, OR 4 PER WSDOT STD PLAN F-80, 10-04
4. MAINTAIN DEPRESSED CURB BETWEEN DRIVEWAYS

5 2.5 0 5 VERT.
SCALE: 1"= 5'

20 10 0 20 HORIZ.
SCALE: 1"=20'

Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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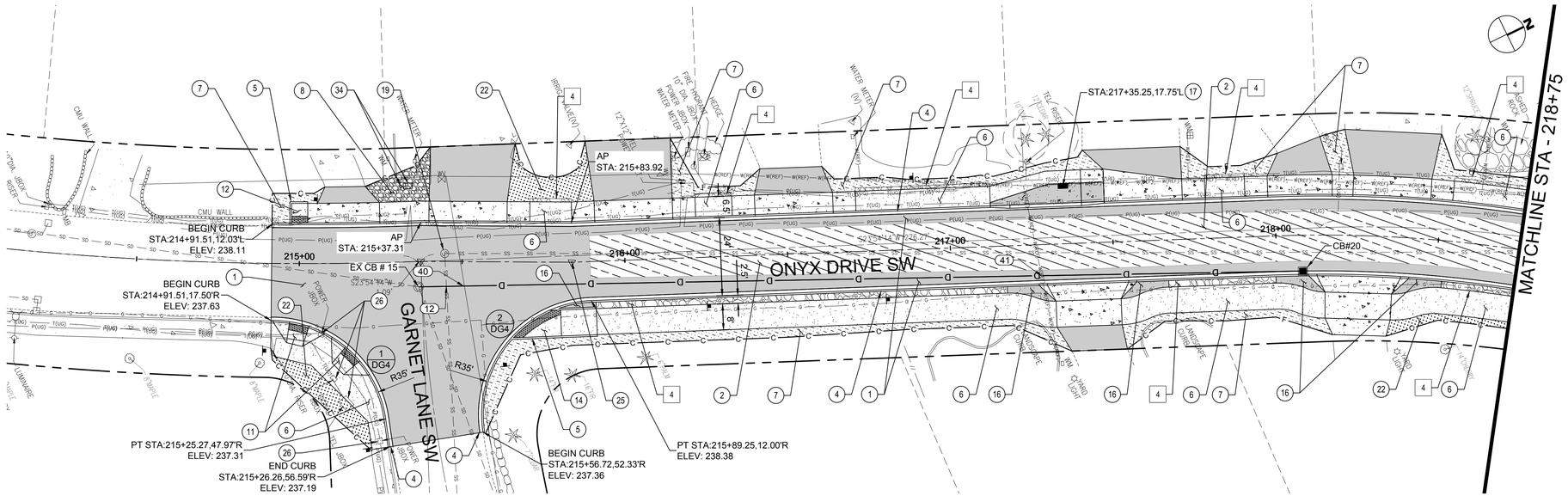
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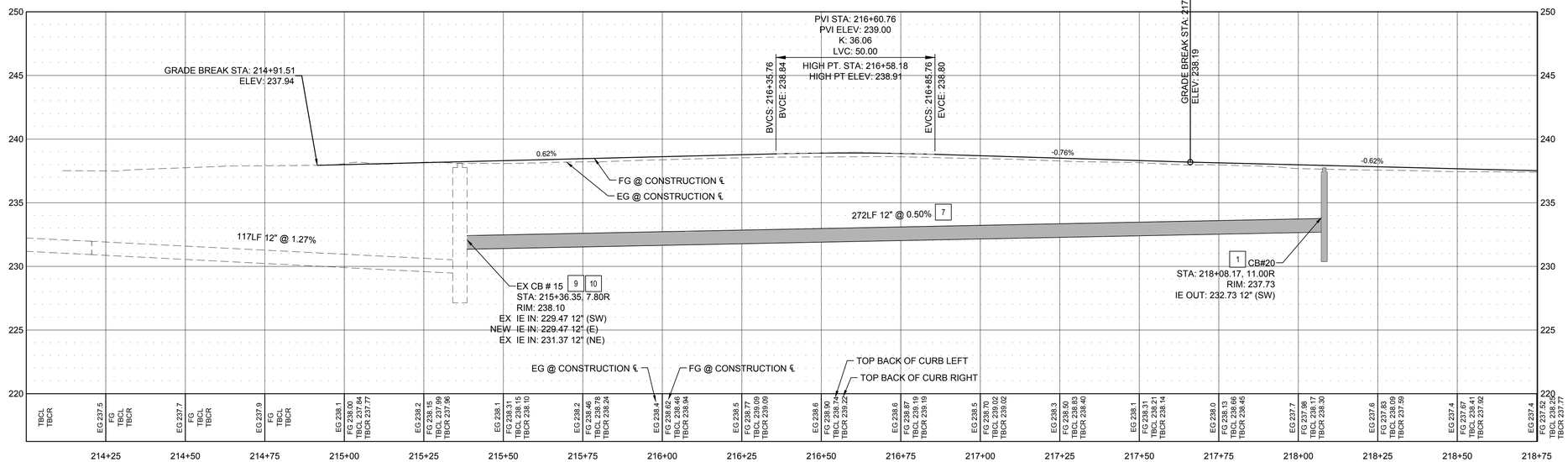
SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

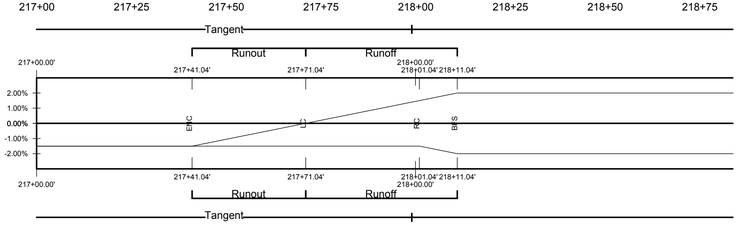
PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: 87TH AVE SW PLAN AND PROFILE - STA 150+25 TO 155+25

PROJECT: 302.0138
DRAWING: PP8
SHEET: 22 of 64

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CONSTRUCTION NOTES:

1. HMA CL. 1/2" PG 58H-22 PAVEMENT. SEE ROADWAY SECTIONS.
2. MINIMUM 1.5" DEPTH AND MAXIMUM 5" DEPTH HMA CLASS 1/2" PG 58H-22 OVERLAY.
4. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER LAKEWOOD STANDARD PLAN FR-04.
5. CEMENT CONCRETE PEDESTRIAN CURB PER LAKEWOOD STANDARD PLAN FR-04.
6. CEMENT CONCRETE SIDEWALK PER LAKEWOOD STANDARD PLAN FR-03.
7. BARK MULCH - 3" DEPTH.
8. GRAVEL SURFACING - 4" COMPACTED DEPTH CSTC.
11. CEMENT CONCRETE CURB RAMP TYPE PERPENDICULAR A PER WSDOT STANDARD PLAN F-40.15-03. SEE CURB RAMP GRADING SHEETS FOR DETAILED GRADING.
12. CEMENT CONCRETE CURB RAMP TYPE PARALLEL A PER WSDOT STANDARD PLAN F-40.12-03. SEE CURB RAMP GRADING SHEETS FOR DETAILED GRADING.
14. CEMENT CONCRETE CURB RAMP TYPE SINGLE DIRECTION A PER WSDOT STANDARD PLAN F-40.16-03. SEE CURB RAMP GRADING SHEETS FOR DETAILED GRADING.
16. COLORED CEMENT CONCRETE SIDEWALK.
17. CLUSTER MAILBOX UNIT WITH DRIVEWAY PULLOUT PER DETAIL ON SHEET CD1. SEE SHEET CD2 FOR CLUSTER MAILBOX TABLE.
19. ADJUST MANHOLE TO FINISH GRADE PER PIERCE COUNTY SEWER STANDARD DETAIL 1002.
22. SEED, FERTILIZE AND MULCH.
24. UTILITY TO BE RELOCATED BY PROVIDER.
25. MONUMENT CASE AND COVER PER LAKEWOOD STANDARD PLAN MI-02 AT LOCATION OF REMOVED MONUMENT.
26. ADJUST JUNCTION BOX TO FINISH GRADE. COORDINATE WORK WITH UTILITY PURVEYOR.
34. RELOCATED COMMUNICATION EQUIPMENT, EXACT LOCATION TO BE DETERMINED AND INSTALLATION TO BE COMPLETED BY UTILITY PURVEYOR.

STORM DRAINAGE NOTES:

1. CATCH BASIN TYPE 1 PER WSDOT STANDARD PLAN B-5.20-02. FURNISH WITH VANED GRATE PER WSDOT STANDARD PLAN B-30.30-03 UNLESS OTHERWISE NOTED.
4. STORMWATER INTERCEPTOR TRENCH PER DETAIL.
7. 12" SCHEDULE A STORM SEWER PIPE.
9. ADJUST CATCH BASIN TO FINISH GRADE.
10. CONNECT TO EXISTING CATCH BASIN.

PIPE CROSSING TABLE

#	UPPER PIPE	INVERT	LOWER PIPE	CROWN	DIFFERENCE
12	STORM	231.39	EX SEWER	227.56	3.84
40	*EX WATER	235.50	STORM	232.46	3.04
41	*EX WATER	234.65	STORM	233.35	1.30

* EXISTING UTILITY DEPTH ASSUMED AT 3' COVER. POTHOLE PRIOR TO CONSTRUCTION TO VERIFY DEPTH AND LOCATION.

DRIVEWAY TABLE

CL STA	TYPE	WIDTH	UP STA RAMP L	DOWN STA RAMP L	APPROACH L	APPROACH MATERIAL
215+15.36	1	19'	3'	SEE NOTE 4	5'	HMA
215+51.73	1	24'	SEE NOTE 4	7'	17'	HMA
216+03.20	1	24'	7'	7'	18'	HMA
216+52.47	1	24'	7'	7'	8'	HMA
217+41.83	3	20'	-	-	7.5'	CONC.
217+59.75	1	24'	7'	7'	7.5'	HMA
218+07.64	1	20'	7'	SEE NOTE 4	9'	HMA
218+25.84	3	20'	-	-	5'	CONC.
218+35.04	1	24'	SEE NOTE 4	7'	14'	HMA

DRIVEWAY NOTES:
1. HMA APPROACH PER DETAIL ON SHEET CD2.
2. CEMENT CONC. APPROACH PER DETAIL ON SHEET CD2.
3. DRIVEWAY TYPE 1,3, OR 4 PER WSDOT STD PLAN F-80. 10-04
4. MAINTAIN DEPRESSED CURB BETWEEN DRIVEWAYS

5 2.5 0 5 VERT.
SCALE: 1"= 5'

20 10 0 20 HORIZ.
SCALE: 1"=20'

Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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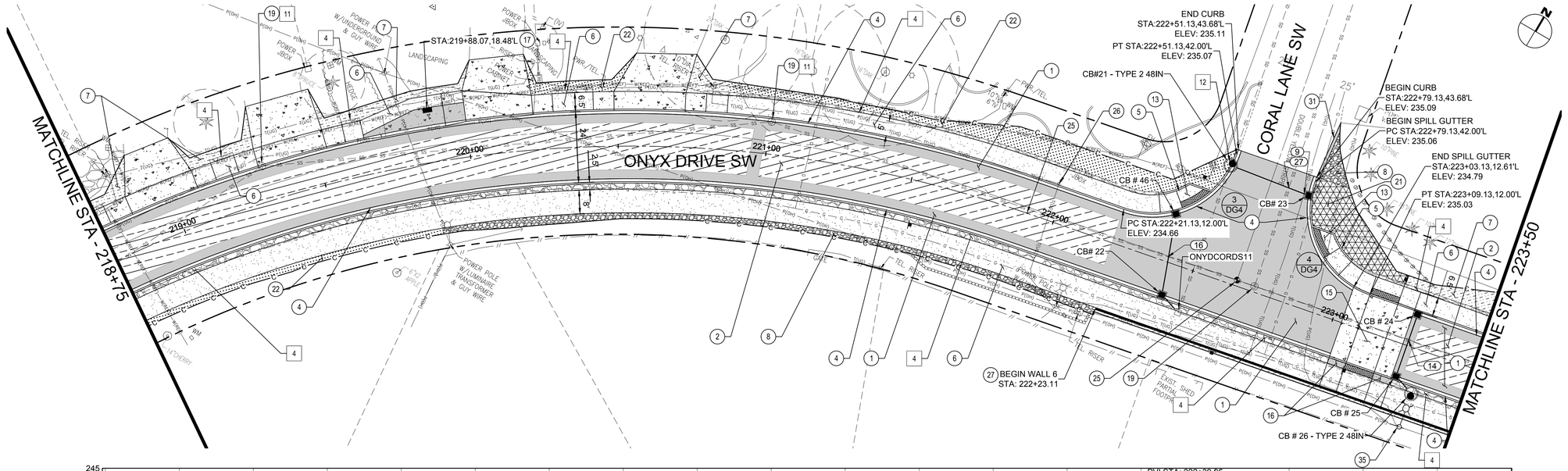
CITY OF LAKEWOOD, WA 1996

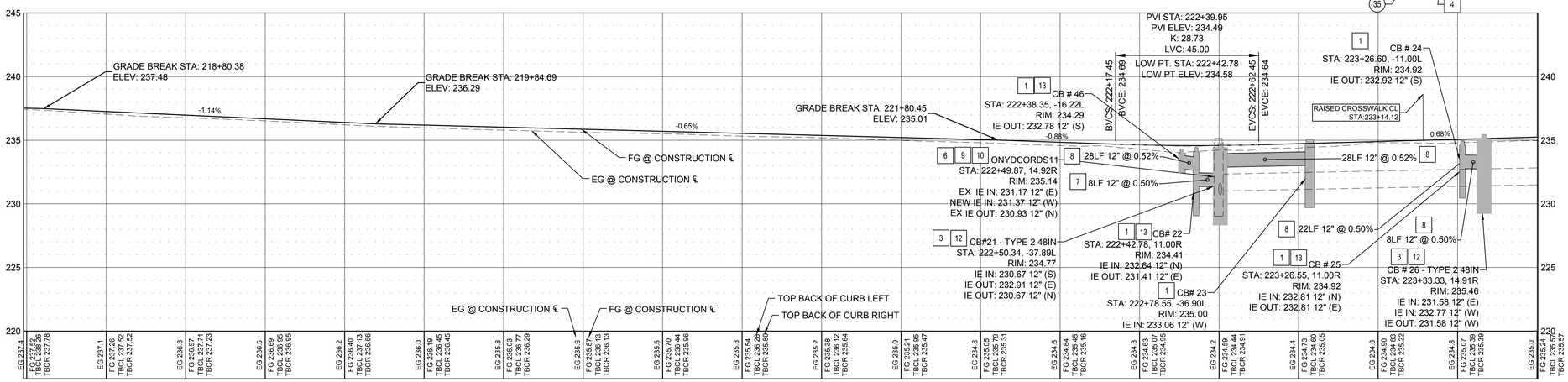
SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

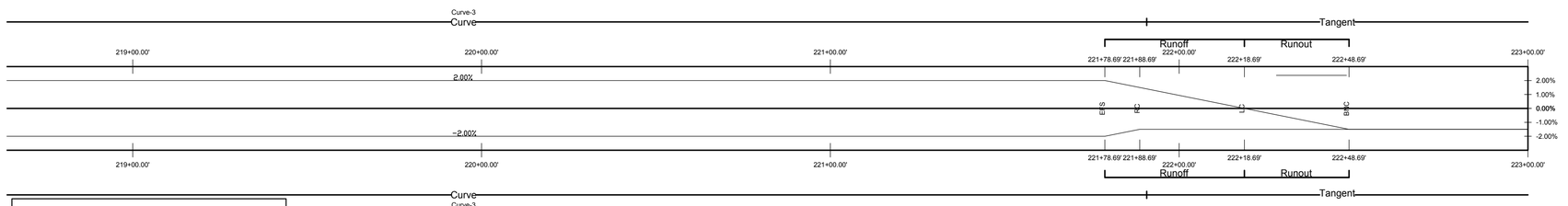
PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: ROADWAY PLAN AND PROFILE - STA 214+00 TO 218+75

PROJECT 302.0138
DRAWING PP9
SHEET 23 of 64

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CONSTRUCTION NOTES:

1. HMA CL. 1/2" PG 58H-22 PAVEMENT. SEE ROADWAY SECTIONS.
2. MINIMUM 1.5" DEPTH AND MAXIMUM 5" DEPTH HMA CLASS 1/2" PG 58H-22 OVERLAY.
4. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER LAKEWOOD STANDARD PLAN FR-04.
5. CEMENT CONCRETE PEDESTRIAN CURB PER LAKEWOOD STANDARD PLAN FR-04.
6. CEMENT CONCRETE SIDEWALK PER LAKEWOOD STANDARD PLAN FR-03.
7. BARK MULCH - 3" DEPTH.
8. GRAVEL SURFACING - 4" COMPACTED DEPTH CSTC.
13. CEMENT CONCRETE CURB RAMP TYPE PARALLEL B PER WSDOT STANDARD PLAN F-40.12-03. SEE CURB RAMP GRADING SHEETS FOR DETAILED GRADING.
15. RAISED CROSSWALK PER DETAIL ON SHEET CD1.
16. COLORED CEMENT CONCRETE SIDEWALK.
17. CLUSTER MAILBOX UNIT WITH DRIVEWAY PULLOUT PER DETAIL ON SHEET CD1. SEE SHEET CD2 FOR CLUSTER MAILBOX TABLE.
19. ADJUST MANHOLE TO FINISH GRADE PER PIERCE COUNTY SEWER STANDARD DETAIL 1002.
21. COBBLE SURFACING PER DETAIL ON SHEET CD1.
22. SEED, FERTILIZE AND MULCH.
25. MONUMENT CASE AND COVER PER LAKEWOOD STANDARD PLAN MI-02 AT LOCATION OF REMOVED MONUMENT.
26. ADJUST JUNCTION BOX TO FINISH GRADE. COORDINATE WORK WITH UTILITY PURVEYOR.
27. CAST-IN-PLACE CONCRETE WALL PER DETAIL ON SHEET CD2 AND WALL PROFILE.
31. HMA WEDGE CURB PER LAKEWOOD STANDARD PLAN FR-04.
35. PROPOSED POWER POLE, EXACT LOCATION TO BE DETERMINED AND INSTALLATION TO BE COMPLETED BY TACOMA POWER.

STORM DRAINAGE NOTES:

1. CATCH BASIN TYPE 1 PER WSDOT STANDARD PLAN B-5.20-02. FURNISH WITH VANED GRATE PER WSDOT STANDARD PLAN B-30.30-03 UNLESS OTHERWISE NOTED.
3. CATCH BASIN TYPE 2 PER WSDOT STANDARD PLAN B-10.20-02. FURNISH WITH VANED GRATE PER WSDOT STANDARD PLAN B-30.30-03 UNLESS OTHERWISE NOTED.
4. STORMWATER INTERCEPTOR TRENCH PER DETAIL.
6. FURNISH AND INSTALL RECTANGULAR SOLID METAL COVER PER WSDOT STANDARD PLAN B-30.20-04.
7. 12" SCHEDULE A STORM SEWER PIPE.
9. ADJUST CATCH BASIN TO FINISH GRADE.
10. CONNECT TO EXISTING CATCH BASIN.
11. ROTATE CONE OF EXISTING STRUCTURE TO PLACE FRAME IN PROPOSED FLOW LINE. INSTALL NEW LADDER OR STEPS AT NEW ACCESS LOCATION.
12. INSTALL NEW OVERBUILD STORM STRUCTURE ON EXISTING STORM LINE.
13. FURNISH AND INSTALL BI-DIRECTIONAL VANED GRATE PER WSDOT STANDARD PLAN B-30.40-03.

PIPE CROSSING TABLE

#	UPPER PIPE	INVERT	LOWER PIPE	CROWN	DIFFERENCE
9	STORM	233.03	+ EX COMM	231.88	1.15
14	STORM	232.85	EX SEWER	227.89	4.96
16	STORM	232.68	EX SEWER	227.94	4.74
27	STORM	233.00	EX SEWER	227.34	5.66

* EXISTING UTILITY DEPTH ASSUMED AT 3' COVER. POTHOLE PRIOR TO CONSTRUCTION TO VERIFY DEPTH AND LOCATION.

DRIVEWAY TABLE

A	TYPE	WIDTH	UP STA RAMP L	DOWN STA RAMP L	APPROACH L	APPROACH MATERIAL
218+97.61	1	24'	8'	7'	13'	CONC.
219+41.81	1	24'	7'	7'	14'	CONC.
220+11.06	1	23.5'	7'	7'	12'	CONC.
220+62.30	1	24'	7'	7'	13'	CONC.

DRIVEWAY NOTES:
1. HMA APPROACH PER DETAIL ON SHEET CD2.
2. CEMENT CONC. APPROACH PER DETAIL ON SHEET CD2.
3. DRIVEWAY TYPE 1,3, OR 4 PER WSDOT STD PLAN F-80. 10-04
4. MAINTAIN DEPRESSED CURB BETWEEN DRIVEWAYS

2.5 0 5 VERT.
SCALE: 1"= 5'
20 10 0 20 HORIZ.
SCALE: 1"=20'

811 Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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T 253.627.4367 F 253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

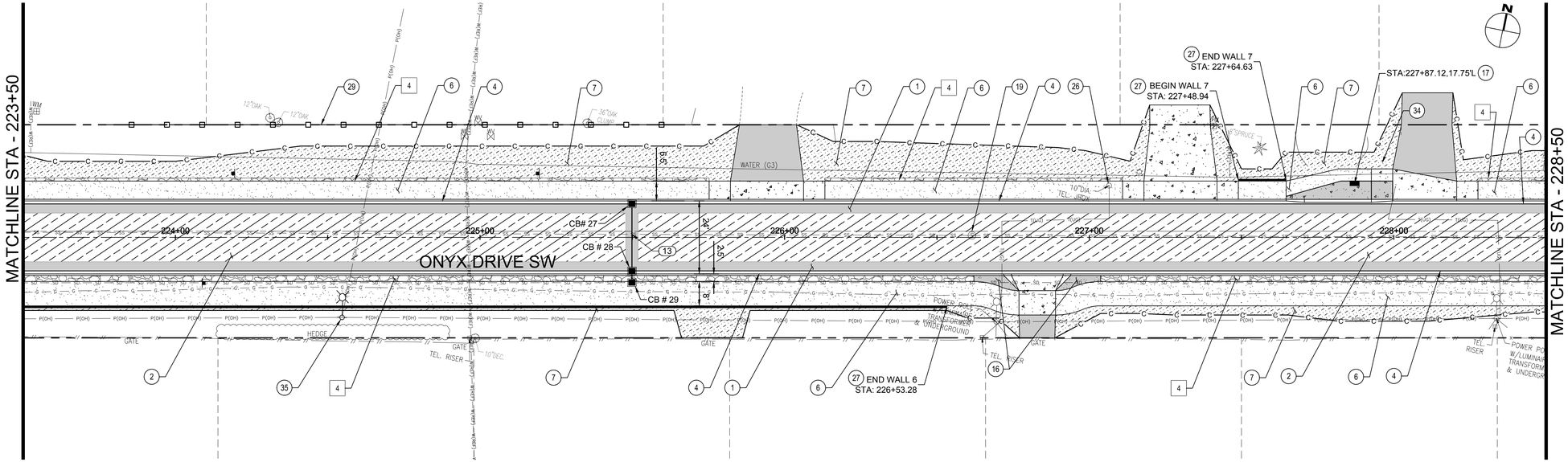
CITY OF LAKEWOOD, WA 1996

SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: ROADWAY PLAN AND PROFILE - STA 218+75 TO 223+50

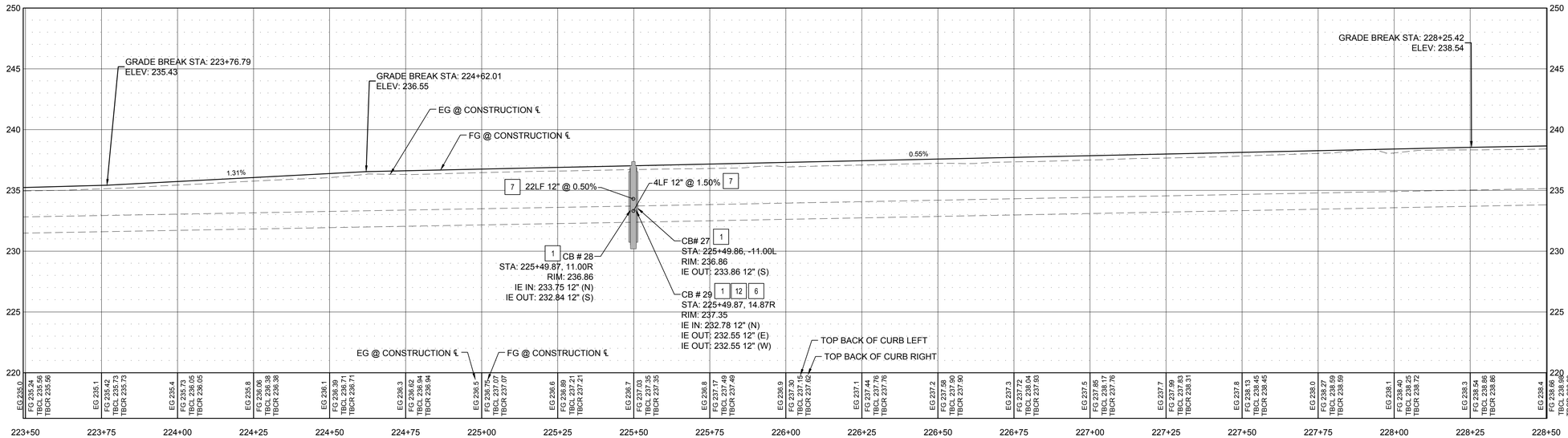
PROJECT: 302.0138
DRAWING: PP10
SHEET: 24 of 64

\\Jupiter\projects\19000\19046.00.00 - Onyx Dr Improvements\Civil\07-CAD\BCRA\production Dwgs\19046C RDAD-PLPR_9-12.dwg 2/13/20



CONSTRUCTION NOTES:

1. HMA CL. 1/2" PG 58H-22 PAVEMENT. SEE ROADWAY SECTIONS.
2. MINIMUM 1.5" DEPTH AND MAXIMUM 5" DEPTH HMA CLASS 1/2" PG 58H-22 OVERLAY.
4. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER LAKEWOOD STANDARD PLAN FR-04.
6. CEMENT CONCRETE SIDEWALK PER LAKEWOOD STANDARD PLAN FR-03.
7. BARK MULCH - 3" DEPTH.
8. GRAVEL SURFACING - 4" COMPACTED DEPTH CSTC.
9. 2" DEPTH HMA CL. 1/2" PG 58H-22 OVER 4" DEPTH CSTC ASPHALT PATH. CROSS SLOPE OF PATH SHALL NOT EXCEED 1.5%.
16. COLORED CEMENT CONCRETE SIDEWALK.
17. CLUSTER MAILBOX UNIT WITH DRIVEWAY PULLOUT PER DETAIL ON SHEET CD1. SEE SHEET CD2 FOR CLUSTER MAILBOX TABLE.
19. ADJUST MANHOLE TO FINISH GRADE PER PIERCE COUNTY SEWER STANDARD DETAIL 1002.
24. UTILITY TO BE RELOCATED BY PROVIDER.
25. MONUMENT CASE AND COVER PER LAKEWOOD STANDARD PLAN MI-02 AT LOCATION OF REMOVED MONUMENT.
26. ADJUST JUNCTION BOX TO FINISH GRADE. COORDINATE WORK WITH UTILITY PURVEYOR.
27. CAST-IN-PLACE CONCRETE WALL PER DETAIL ON SHEET CD2 AND WALL PROFILE.
29. 6' WOOD FENCE. LOCATE AT R/W AND TIE-IN EXISTING.
34. RELOCATED COMMUNICATION EQUIPMENT, EXACT LOCATION TO BE DETERMINED AND INSTALLATION TO BE COMPLETED BY UTILITY PURVEYOR.
35. PROPOSED POWER POLE, EXACT LOCATION TO BE DETERMINED AND INSTALLATION TO BE COMPLETED BY TACOMA POWER.



STORM DRAINAGE NOTES:

1. CATCH BASIN TYPE 1 PER WSDOT STANDARD PLAN B-5.20-02. FURNISH WITH VANED GRATE PER WSDOT STANDARD PLAN B-30.30-03 UNLESS OTHERWISE NOTED.
3. CATCH BASIN TYPE 2 PER WSDOT STANDARD PLAN B-10.20-02. FURNISH WITH VANED GRATE PER WSDOT STANDARD PLAN B-30.30-03 UNLESS OTHERWISE NOTED.
4. STORMWATER INTERCEPTOR TRENCH PER DETAIL.
6. FURNISH AND INSTALL RECTANGULAR SOLID METAL COVER PER WSDOT STANDARD PLAN B-30.20-04.
7. 12" SCHEDULE A STORM SEWER PIPE.
12. INSTALL NEW OVERBUILD STORM STRUCTURE ON EXISTING STORM LINE.

5 2.5 0 5 VERT.
SCALE: 1"= 5'
20 10 0 20 HORIZ.
SCALE: 1"=20'

PIPE CROSSING TABLE

(#)	UPPER PIPE	INVERT	LOWER PIPE	CROWN	DIFFERENCE
13	STORM	233.64	EX SEWER	229.62	4.03

* EXISTING UTILITY DEPTH ASSUMED AT 3' COVER. POTHOLE PRIOR TO CONSTRUCTION TO VERIFY DEPTH AND LOCATION.

DRIVEWAY TABLE

CL STA	TYPE	WIDTH	UP STA RAMP L	DOWN STA RAMP L	APPROACH L	APPROACH MATERIAL
225+94.22	1	24'	7'	7'	18.5'	HMA
226+82.93	3	12'	-	-	7.5'	HMA
227+29.94	1	24'	7'	7'	25'	CONC.
228+10.12	1	21'	7'	7'	27'	HMA

DRIVEWAY NOTES:
1. HMA APPROACH PER DETAIL ON SHEET CD2.
2. CEMENT CONC. APPROACH PER DETAIL ON SHEET CD2.
3. DRIVEWAY TYPE 1,3, OR 4 PER WSDOT STD PLAN F-80. 10-04
4. MAINTAIN DEPRESSED CURB BETWEEN DRIVEWAYS

Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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T 253.627.4367 F 253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

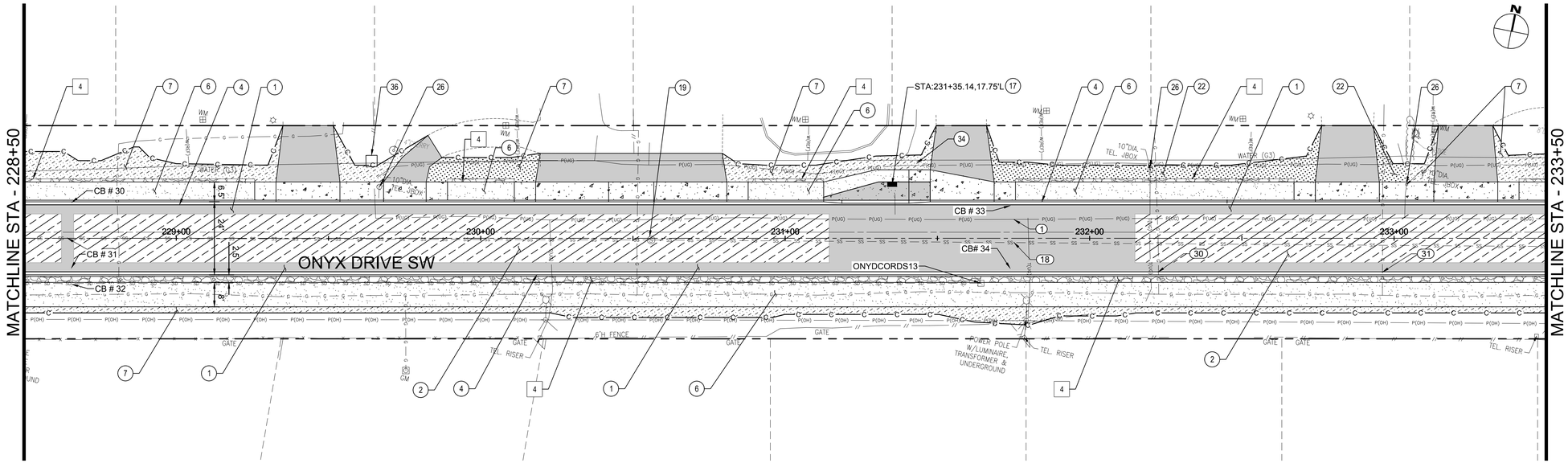
CITY OF LAKEWOOD, WA 1996

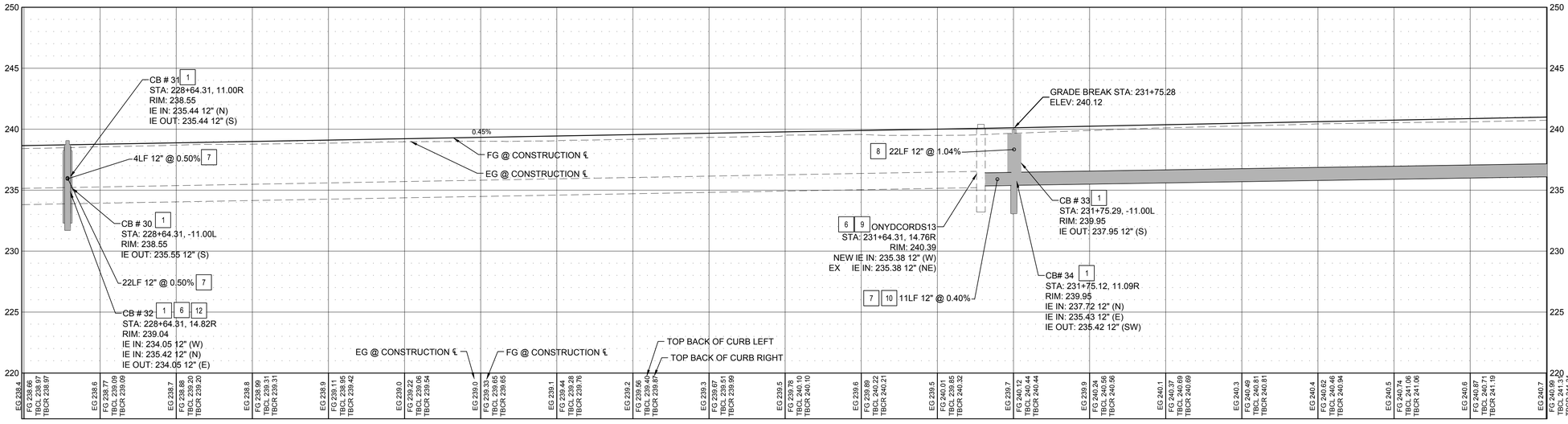
SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: ROADWAY PLAN AND PROFILE - STA 223+50 TO 228+50

PROJECT: 302.0138
DRAWING: PP11
SHEET: 25 of 64

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CONSTRUCTION NOTES:

1. HMA CL. 1/2" PG 58H-22 PAVEMENT. SEE ROADWAY SECTIONS.
2. MINIMUM 1.5" DEPTH AND MAXIMUM 5" DEPTH HMA CLASS 1/2" PG 58H-22 OVERLAY.
4. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER LAKEWOOD STANDARD PLAN FR-04.
6. CEMENT CONCRETE SIDEWALK PER LAKEWOOD STANDARD PLAN FR-03.
7. BARK MULCH - 3" DEPTH.
16. COLORED CEMENT CONCRETE SIDEWALK.
17. CLUSTER MAILBOX UNIT WITH DRIVEWAY PULLOUT PER DETAIL ON SHEET CD1. SEE SHEET CD2 FOR CLUSTER MAILBOX TABLE.
19. ADJUST MANHOLE TO FINISH GRADE PER PIERCE COUNTY SEWER STANDARD DETAIL 1002.
22. SEED, FERTILIZE AND MULCH.
26. ADJUST JUNCTION BOX TO FINISH GRADE. COORDINATE WORK WITH UTILITY PURVEYOR.
34. RELOCATED COMMUNICATION EQUIPMENT, EXACT LOCATION TO BE DETERMINED AND INSTALLATION TO BE COMPLETED BY UTILITY PURVEYOR.
36. PROPOSED TRANSFORMER, EXACT LOCATION TO BE DETERMINED AND INSTALLATION TO BE COMPLETED BY TACOMA POWER.

STORM DRAINAGE NOTES:

1. CATCH BASIN TYPE 1 PER WSDOT STANDARD PLAN B-5.20-02. FURNISH WITH VANED GRATE PER WSDOT STANDARD PLAN B-30.30-03 UNLESS OTHERWISE NOTED.
3. CATCH BASIN TYPE 2 PER WSDOT STANDARD PLAN B-10.20-02. FURNISH WITH VANED GRATE PER WSDOT STANDARD PLAN B-30.30-03 UNLESS OTHERWISE NOTED.
4. STORMWATER INTERCEPTOR TRENCH PER DETAIL.
6. FURNISH AND INSTALL RECTANGULAR SOLID METAL COVER PER WSDOT STANDARD PLAN B-30.20-04.
7. 12" SCHEDULE A STORM SEWER PIPE.
9. ADJUST CATCH BASIN TO FINISH GRADE.
10. CONNECT TO EXISTING CATCH BASIN.
12. INSTALL NEW OVERBUILD STORM STRUCTURE ON EXISTING STORM LINE.

PIPE CROSSING TABLE

(#)	UPPER PIPE	INVERT	LOWER PIPE	CROWN	DIFFERENCE
1	STORM	237.88	* EX POWER	236.49	1.38
17	STORM	235.33	EX SEWER	231.45	3.87
18	STORM	237.80	EX SEWER	232.83	4.97
30	* EX GAS	236.68	STORM	236.64	0.04

* EXISTING UTILITY DEPTH ASSUMED AT 3' COVER. POTHOLE PRIOR TO CONSTRUCTION TO VERIFY DEPTH AND LOCATION.

DRIVEWAY TABLE

CL STA	TYPE	WIDTH	UP STA RAMP L	DOWN STA RAMP L	APPROACH L	APPROACH MATERIAL
229+43.27	1	21'	7'	SEE NOTE 4	19'	HMA
229+75.11	1	14'	SEE NOTE 4	7'	12'	HMA
230+30.04	1	24'	7'	SEE NOTE 4	9.5'	HMA
230+68.86	1	24'	SEE NOTE 4	7'	9.5'	HMA
231+58.14	1	21'	7'	7'	16'	HMA
232+90.17	1	21'	7'	SEE NOTE 4	18.5'	HMA
233+23.55	1	21'	SEE NOTE 4	5'	18.5'	HMA

DRIVEWAY NOTES:

1. HMA APPROACH PER DETAIL ON SHEET CD2.
2. CEMENT CONC. APPROACH PER DETAIL ON SHEET CD2.
3. DRIVEWAY TYPE 1,3, OR 4 PER WSDOT STD PLAN F-80. 10-04
4. MAINTAIN DEPRESSED CURB BETWEEN DRIVEWAYS

5 2.5 0 5 VERT.
SCALE: 1"= 5'

20 10 0 20 HORIZ.
SCALE: 1"=20'

811 Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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T 253.627.4367 F 253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

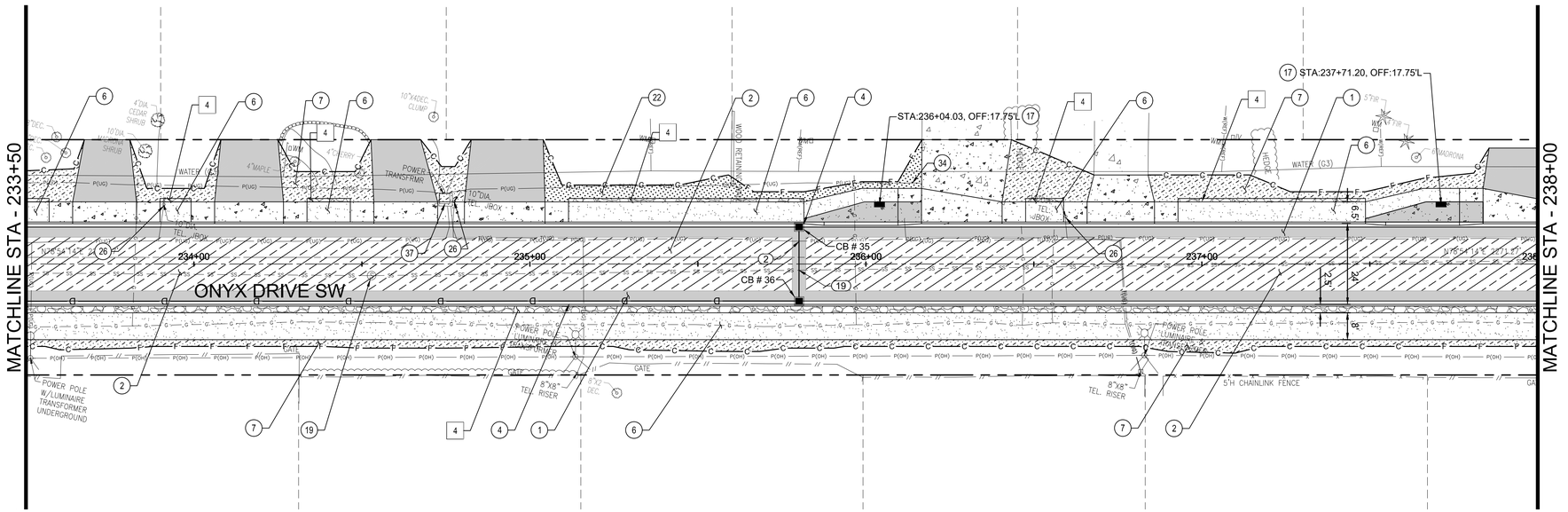
CITY OF LAKEWOOD, WA 1996

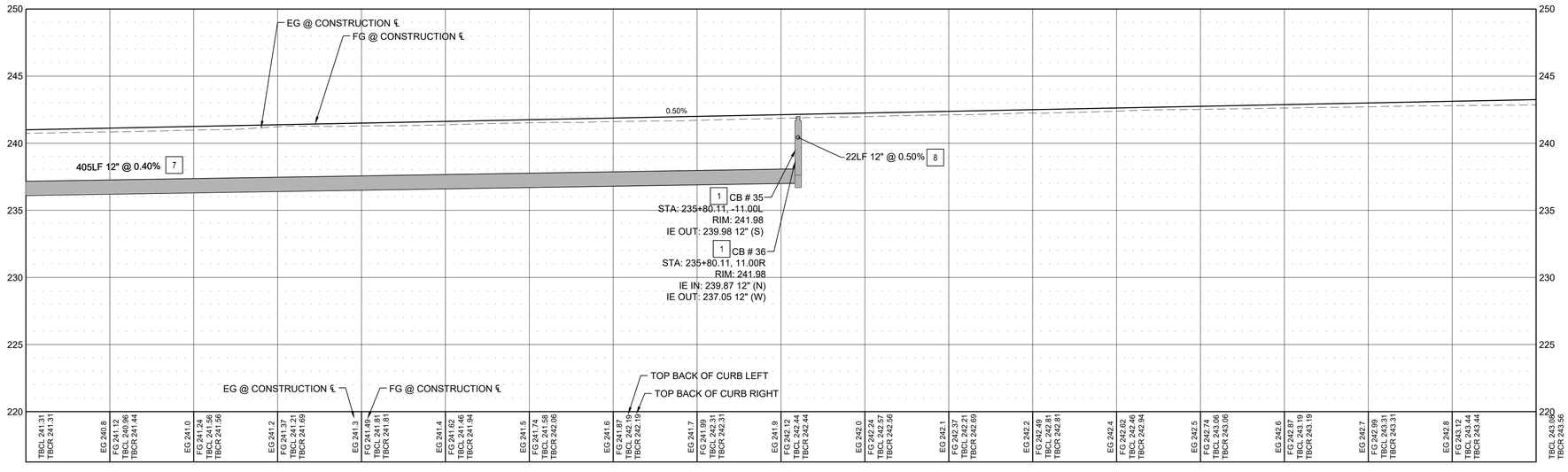
SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: ROADWAY PLAN AND PROFILE - STA 228+50 TO 233+50

PROJECT 302.0138
DRAWING PP12
SHEET 26 of 64

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CONSTRUCTION NOTES:

1. HMA CL. 1/2" PG 58H-22 PAVEMENT. SEE ROADWAY SECTIONS.
2. MINIMUM 1.5" DEPTH AND MAXIMUM 5" DEPTH HMA CLASS 1/2" PG 58H-22 OVERLAY.
4. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER LAKEWOOD STANDARD PLAN FR-04.
6. CEMENT CONCRETE SIDEWALK PER LAKEWOOD STANDARD PLAN FR-03.
7. BARK MULCH - 3" DEPTH.
17. CLUSTER MAILBOX UNIT WITH DRIVEWAY PULLOUT PER DETAIL ON SHEET CD1. SEE SHEET CD2 FOR CLUSTER MAILBOX TABLE.
19. ADJUST MANHOLE TO FINISH GRADE PER PIERCE COUNTY SEWER STANDARD DETAIL 1002.
20. ADJUST VALVE CASING TO FINISH GRADE PER LAKEWOOD STANDARD PLAN MI-03.
22. SEED, FERTILIZE AND MULCH.
24. UTILITY TO BE RELOCATED BY PROVIDER.
34. RELOCATED COMMUNICATION EQUIPMENT, EXACT LOCATION TO BE DETERMINED AND INSTALLATION TO BE COMPLETED BY UTILITY PURVEYOR.
37. EXISTING TRANSFORMER ADJUSTED TO GRADE BY PURVEYOR.

STORM DRAINAGE NOTES:

1. CATCH BASIN TYPE 1 PER WSDOT STANDARD PLAN B-5.20-02. FURNISH WITH VANED GRATE PER WSDOT STANDARD PLAN B-30.30-03 UNLESS OTHERWISE NOTED.
4. STORMWATER INTERCEPTOR TRENCH PER DETAIL.
7. 12" SCHEDULE A STORM SEWER PIPE.
8. 12" DI STORM SEWER PIPE.

PIPE CROSSING TABLE

#	UPPER PIPE	INVERT	LOWER PIPE	CROWN	DIFFERENCE
2	STORM	239.94	* EX POWER	238.60	1.33
19	STORM	239.89	EX SEWER	235.25	4.65
31	* EX GAS	237.15	STORM	236.94	0.22

* EXISTING UTILITY DEPTH ASSUMED AT 3' COVER. POTHOLE PRIOR TO CONSTRUCTION TO VERIFY DEPTH AND LOCATION.

DRIVEWAY TABLE

CL STA	TYPE	WIDTH	UP STA RAMP L	DOWN STA RAMP L	APPROACH L	APPROACH MATERIAL
233+73.41	1	19'	7'	7'	18.5'	HMA
234+16.43	1	20.5'	7'	7'	18.5'	HMA
234+63.04	1	19'	7'	SEE NOTE 4	18.5'	HMA
234+92.48	1	24'	SEE NOTE 4	7'	18.5'	HMA
236+28.55	1	24'	7'	7'	16.5'	CONC.
236+75.87	1	20'	7'	7'	8'	CONC.
237+94.20	1	21	7'	7'	14'	HMA

DRIVEWAY NOTES:
1. HMA APPROACH PER DETAIL ON SHEET CD2.
2. CEMENT CONC. APPROACH PER DETAIL ON SHEET CD2.
3. DRIVEWAY TYPE 1,3, OR 4 PER WSDOT STD PLAN F-80. 10-04
4. MAINTAIN DEPRESSED CURB BETWEEN DRIVEWAYS

5 2.5 0 5 VERT.
SCALE: 1"= 5'

20 10 0 20 HORIZ.
SCALE: 1"=20'

811 Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

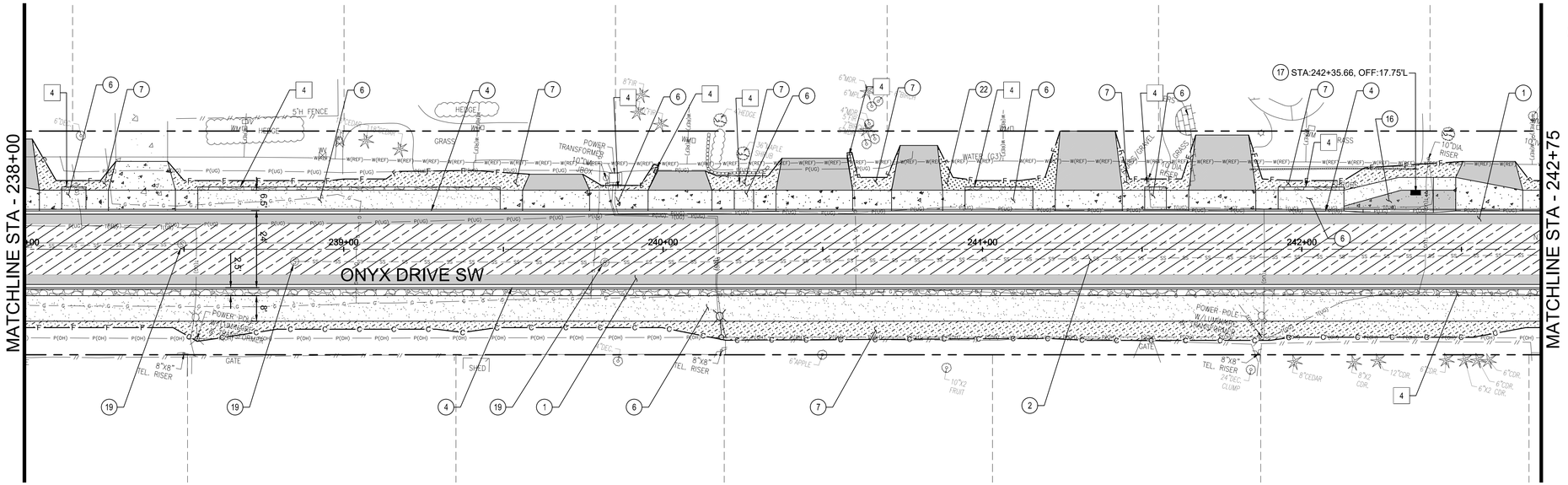
CITY OF LAKEWOOD, WA 1996

SHANNON MARIE PODGORSKI official STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: ROADWAY PLAN AND PROFILE - STA 233+50 TO 238+00

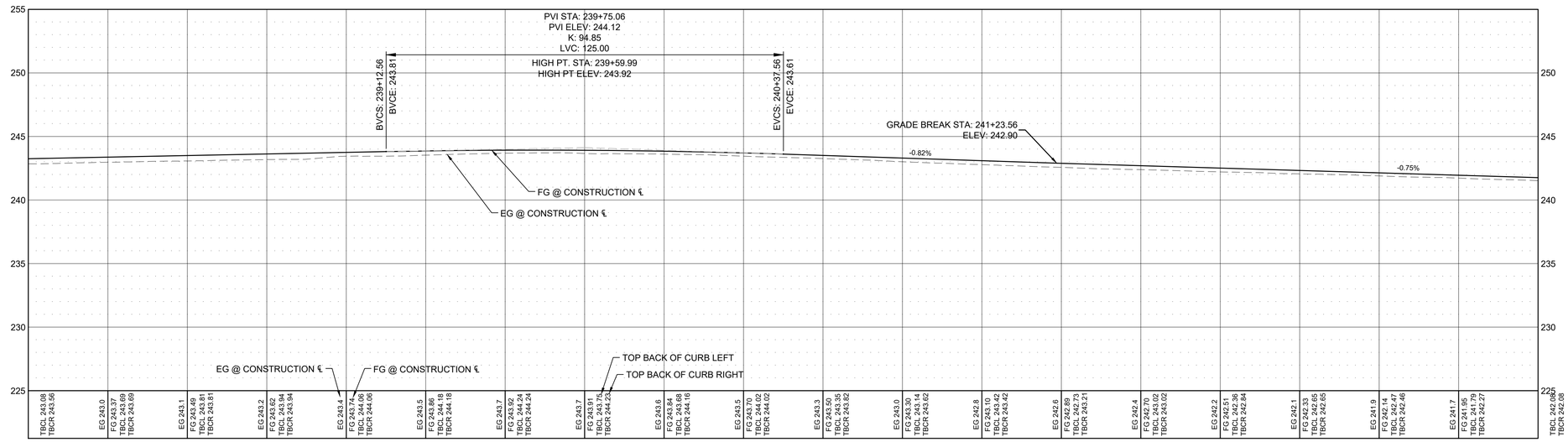
PROJECT 302.0138
DRAWING PP13
SHEET 27 of 64

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CONSTRUCTION NOTES:

1. HMA CL. 1/2" PG 58H-22 PAVEMENT. SEE ROADWAY SECTIONS.
2. MINIMUM 1.5" DEPTH AND MAXIMUM 5" DEPTH HMA CLASS 1/2" PG 58H-22 OVERLAY.
4. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER LAKEWOOD STANDARD PLAN FR-04.
6. CEMENT CONCRETE SIDEWALK PER LAKEWOOD STANDARD PLAN FR-03.
7. BARK MULCH - 3" DEPTH.
16. COLORED CEMENT CONCRETE SIDEWALK.
17. CLUSTER MAILBOX UNIT WITH DRIVEWAY PULLOUT PER DETAIL ON SHEET CD1. SEE SHEET CD2 FOR CLUSTER MAILBOX TABLE.
19. ADJUST MANHOLE TO FINISH GRADE PER PIERCE COUNTY SEWER STANDARD DETAIL 1002.
22. SEED, FERTILIZE AND MULCH.



STORM DRAINAGE NOTES:

4 STORMWATER INTERCEPTOR TRENCH PER DETAIL.

DRIVEWAY TABLE

CL STA	TYPE	WIDTH	UP STA RAMP L	DOWN STA RAMP L	APPROACH L	APPROACH MATERIAL
238+36.83	1	21'	7'	7'	9'	CONC.
239+66.51	1	21'	7'	SEE NOTE 4	5'	HMA
240+05.32	1	20'	SEE NOTE 4	7'	6'	HMA
240+47.33	1	24'	7'	SEE NOTE 4	10'	HMA
240+79.57	1	16'	SEE NOTE 4	7'	14'	HMA
241+33.28	1	21'	7'	7'	18.5'	HMA
241+75.11	1	21'	7'	7'	17'	HMA
242+58.66	1	21	7	7	7'	HMA

DRIVEWAY NOTES:

1. HMA APPROACH PER DETAIL ON SHEET CD2.
2. CEMENT CONC. APPROACH PER DETAIL ON SHEET CD2.
3. DRIVEWAY TYPE 1,3, OR 4 PER WSDOT STD PLAN F-80. 10-04
4. MAINTAIN DEPRESSED CURB BETWEEN DRIVEWAYS

5 2.5 0 5 VERT.
SCALE: 1"= 5'

20 10 0 20 HORIZ.
SCALE: 1"=20'

Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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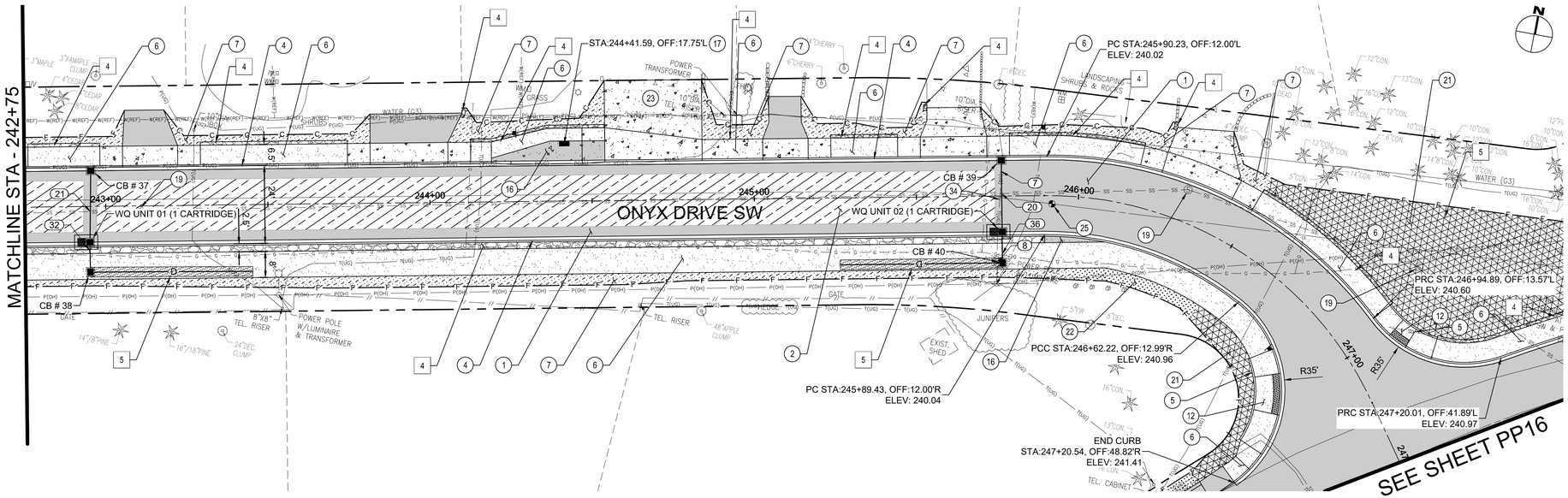
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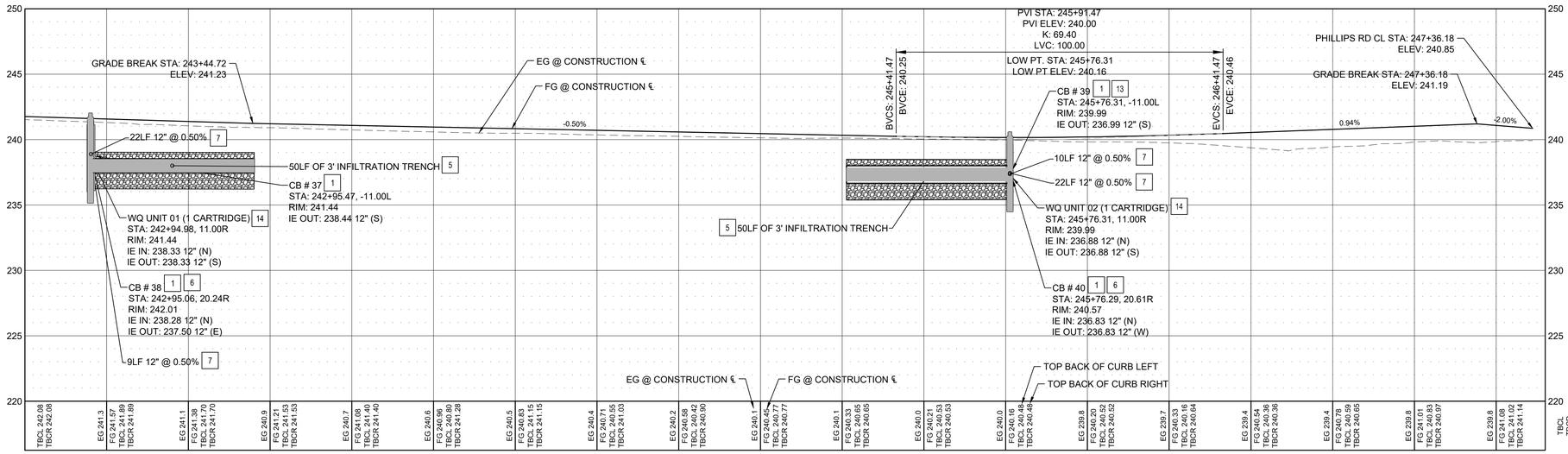
SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: ROADWAY PLAN AND PROFILE - STA 238+00 TO 242+75

PROJECT: 302.0138
DRAWING: PP14
SHEET: 28 of 64

P:\19000\19046.00.00 - Onyx Dr Improvements\Civil\07-CAD\BCRA\Production Dwgs\19046C ROAD-PLPR_13-16.dwg 2/13/20





CONSTRUCTION NOTES:

1. HMA CL. 1/2" PG 58H-22 PAVEMENT. SEE ROADWAY SECTIONS.
2. MINIMUM 1.5" DEPTH AND MAXIMUM 5" DEPTH HMA CLASS 1/2" PG 58H-22 OVERLAY.
4. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER LAKEWOOD STANDARD PLAN FR-04.
5. CEMENT CONCRETE PEDESTRIAN CURB PER LAKEWOOD STANDARD PLAN FR-04.
6. CEMENT CONCRETE SIDEWALK PER LAKEWOOD STANDARD PLAN FR-03.
7. BARK MULCH - 3" DEPTH.
12. CEMENT CONCRETE CURB RAMP TYPE PARALLEL A PER WSDOT STANDARD PLAN F-40.12-03. SEE CURB RAMP GRADING SHEETS FOR DETAILED GRADING.
16. COLORED CEMENT CONCRETE SIDEWALK.
17. CLUSTER MAILBOX UNIT WITH DRIVEWAY PULLOUT PER DETAIL ON SHEET CD1. SEE SHEET CD2 FOR CLUSTER MAILBOX TABLE.
19. ADJUST MANHOLE TO FINISH GRADE PER PIERCE COUNTY SEWER STANDARD DETAIL 1002.
20. ADJUST VALVE CASING TO FINISH GRADE PER LAKEWOOD STANDARD PLAN MI-03.
21. COBBLE SURFACING PER DETAIL ON SHEET CD1.
22. SEED, FERTILIZE AND MULCH.
23. GRADE DRIVEWAY AWAY FROM ROADWAY AT 1.5%. PROVIDE ¼" LIP ON DEPRESSED CURB TO CHANNELIZE FLOW ACROSS DRIVEWAY.
25. MONUMENT CASE AND COVER PER LAKEWOOD STANDARD PLAN MI-02 AT LOCATION OF REMOVED MONUMENT.
34. RELOCATED COMMUNICATION EQUIPMENT, EXACT LOCATION TO BE DETERMINED AND INSTALLATION TO BE COMPLETED BY UTILITY PURVEYOR.

STORM DRAINAGE NOTES:

1. CATCH BASIN TYPE 1 PER WSDOT STANDARD PLAN B-5.20-02. FURNISH WITH VANED GRATE PER WSDOT STANDARD PLAN B-30.30-03 UNLESS OTHERWISE NOTED.
3. CATCH BASIN TYPE 2 PER WSDOT STANDARD PLAN B-10.20-02. FURNISH WITH VANED GRATE PER WSDOT STANDARD PLAN B-30.30-03 UNLESS OTHERWISE NOTED.
4. STORMWATER INTERCEPTOR TRENCH PER DETAIL.
5. INFILTRATION TRENCH PER LAKEWOOD STANDARD PLAN SW-03. POTHOLE TO LOCATE UTILITIES IN AREA PRIOR TO BEGINNING STORM DRAINAGE WORK AND COORDINATE FINAL LOCATION OF INFILTRATION TRENCH WITH THE ENGINEER.
6. FURNISH AND INSTALL RECTANGULAR SOLID METAL COVER PER WSDOT STANDARD PLAN B-30.20-04.
7. 12" SCHEDULE A STORM SEWER PIPE.
13. FURNISH AND INSTALL BI-DIRECTIONAL VANED GRATE PER WSDOT STANDARD PLAN B-30.40-03.
14. WATER QUALITY TREATMENT UNIT.

PIPE CROSSING TABLE

#	UPPER PIPE	INVERT	LOWER PIPE	CROWN	DIFFERENCE
7	STORM	236.95	* EX COMM	236.68	0.27
8	STORM	236.66	* EX COMM	236.98	-0.32
20	STORM	236.92	EX SEWER	232.39	4.53
21	STORM	238.35	EX SEWER	235.16	3.19
32	STORM	238.29	* EX GAS	238.49	-0.20
36	STORM	236.68	* EX GAS	236.98	-0.30

* EXISTING UTILITY DEPTH ASSUMED AT 3' COVER. POTHOLE PRIOR TO CONSTRUCTION TO VERIFY DEPTH AND LOCATION.

DRIVEWAY TABLE

CL STA	TYPE	WIDTH	UP STA RAMP L	DOWN STA RAMP L	APPROACH L	APPROACH MATERIAL
243+13,84	1	17'	7'	7'	11'	HMA
243+93.7	1	24'	7'	7'	9'	HMA
244+69.02	1	30'	7'	SEE NOTE 4	16'	CONC.
245+09.78	1	14'	SEE NOTE 4	7'	13'	HMA
245+61.63	1	20.5'	7'	7'	9'	CONC.
246+33.09	1	23'	7'	7'	10'	CONC.

DRIVEWAY NOTES:
1. HMA APPROACH PER DETAIL ON SHEET CD2.
2. CEMENT CONC. APPROACH PER DETAIL ON SHEET CD2.
3. DRIVEWAY TYPE 1,3, OR 4 PER WSDOT STD PLAN F-80, 10-04
4. MAINTAIN DEPRESSED CURB BETWEEN DRIVEWAYS

5 2.5 0 5 VERT.
SCALE: 1"= 5'
20 10 0 20 HORIZ.
SCALE: 1"=20'

Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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T 253.627.4367 F 253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

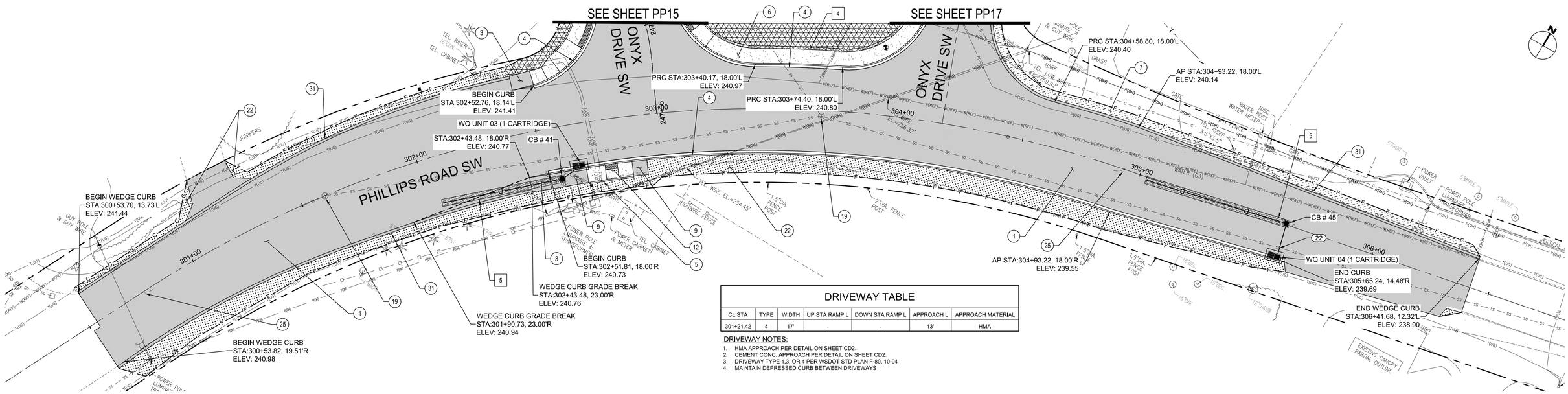
CITY OF LAKEWOOD, WA 1996

SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: ROADWAY PLAN AND PROFILE - STA 242+75 TO 247+36

PROJECT 302.0138
DRAWING PP15
SHEET 29 of 64

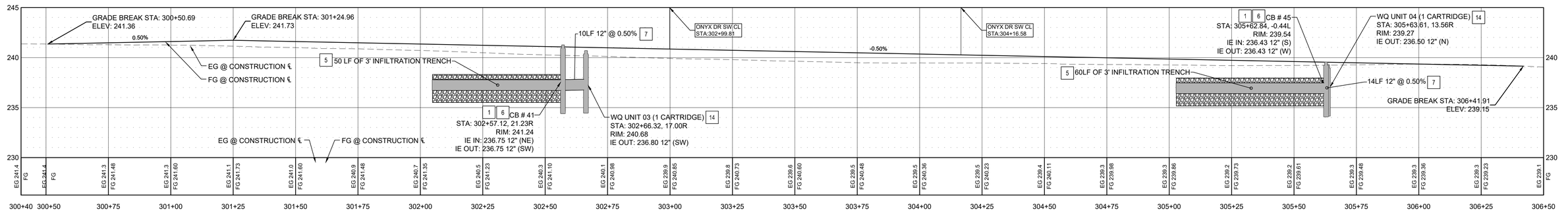
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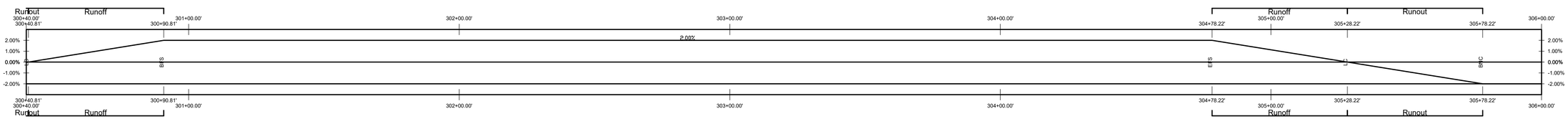


DRIVEWAY TABLE						
CL STA	TYPE	WIDTH	UP STA RAMP L	DOWN STA RAMP L	APPROACH L	APPROACH MATERIAL
301+21.42	4	17'	-	-	13'	HMA

DRIVEWAY NOTES:

1. HMA APPROACH PER DETAIL ON SHEET CD2.
2. CEMENT CONC. APPROACH PER DETAIL ON SHEET CD2.
3. DRIVEWAY TYPE 1,3, OR 4 PER WSDOT STD PLAN F-80. 10-04
4. MAINTAIN DEPRESSED CURB BETWEEN DRIVEWAYS





CONSTRUCTION NOTES:

1. HMA CL. 1/2" PG 58H-22 PAVEMENT. SEE ROADWAY SECTIONS.
3. HMA RAMP PER DETAIL ON SHEET CD1.
4. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER LAKEWOOD STANDARD PLAN FR-04.
5. CEMENT CONCRETE PEDESTRIAN CURB PER LAKEWOOD STANDARD PLAN FR-04.
6. CEMENT CONCRETE SIDEWALK PER LAKEWOOD STANDARD PLAN FR-03.
9. 2" DEPTH HMA CL. 1/2" PG 58H-22 OVER 4" DEPTH CSTC ASPHALT PATH. CROSS SLOPE OF PATH SHALL NOT EXCEED 1.5%.
12. CEMENT CONCRETE CURB RAMP TYPE PARALLEL A PER WSDOT STANDARD PLAN F-40.12-03. SEE CURB RAMP GRADING SHEETS FOR DETAILED GRADING.
19. ADJUST MANHOLE TO FINISH GRADE PER PIERCE COUNTY SEWER STANDARD DETAIL 1002.
22. SEED, FERTILIZE AND MULCH.
25. MONUMENT CASE AND COVER PER LAKEWOOD STANDARD PLAN MI-02 AT LOCATION OF REMOVED MONUMENT.
31. HMA WEDGE CURB PER LAKEWOOD STANDARD PLAN FR-04.

PIPE CROSSING TABLE					
@	UPPER PIPE	INVERT	LOWER PIPE	CROWN	DIFFERENCE
22	STORM	236.46	EX SEWER	211.68	24.78

* EXISTING UTILITY DEPTH ASSUMED AT 3' COVER. POTHOLE PRIOR TO CONSTRUCTION TO VERIFY DEPTH AND LOCATION.

STORM DRAINAGE NOTES:

1. CATCH BASIN TYPE 1 PER WSDOT STANDARD PLAN B-5.20-02. FURNISH WITH VANED GRATE PER WSDOT STANDARD PLAN B-30.30-03 UNLESS OTHERWISE NOTED.
4. STORMWATER INTERCEPTOR TRENCH PER DETAIL.
5. INFILTRATION TRENCH PER LAKEWOOD STANDARD PLAN SW-03. POTHOLE TO LOCATE UTILITIES IN AREA PRIOR TO BEGINNING STORM DRAINAGE WORK AND COORDINATE FINAL LOCATION OF INFILTRATION TRENCH WITH THE ENGINEER.
6. FURNISH AND INSTALL RECTANGULAR SOLID METAL COVER PER WSDOT STANDARD PLAN B-30.20-04.
7. 12" SCHEDULE A STORM SEWER PIPE.
13. FURNISH AND INSTALL BI-DIRECTIONAL VANED GRATE PER WSDOT STANDARD PLAN B-30.40-03.
14. WATER QUALITY TREATMENT UNIT.

5 2.5 0 5 VERT.
SCALE: 1"= 5'

20 10 0 20 HORIZ.
SCALE: 1"=20'

811 Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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T 253.627.4367 F 253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

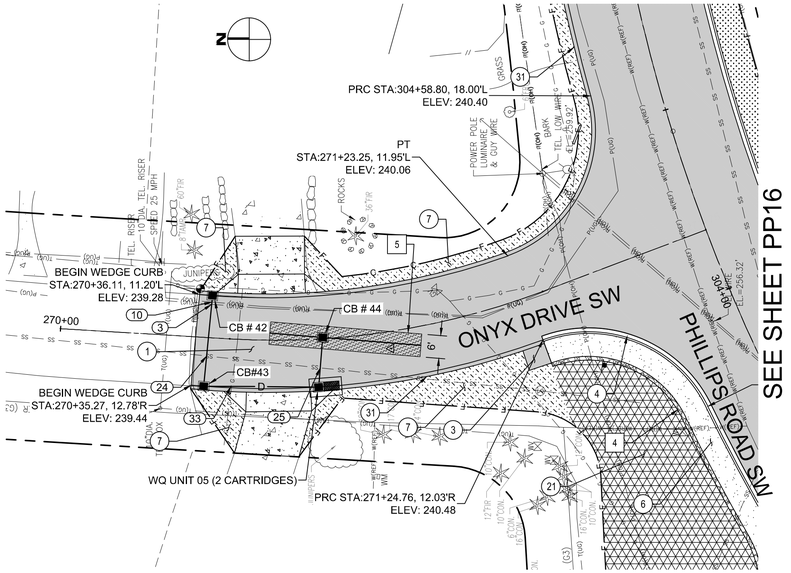
CITY OF LAKEWOOD, WA 1996

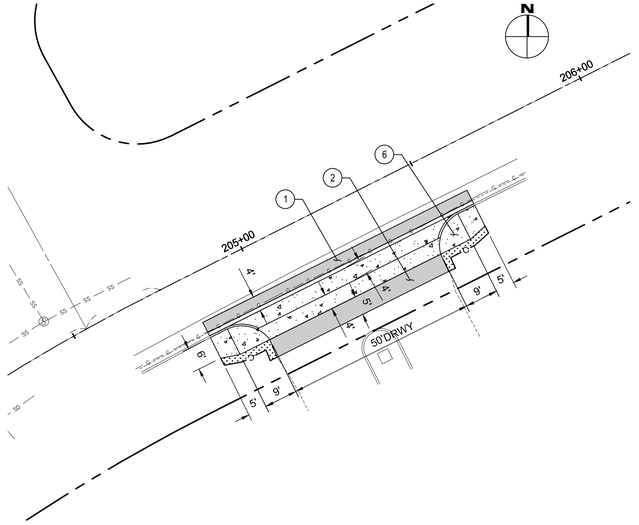
SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: PHILLIPS RD SW PLAN AND PROFILE - STA 300+50 TO 306+50

PROJECT: 302.0138
DRAWING: PP16
SHEET: 30 of 64

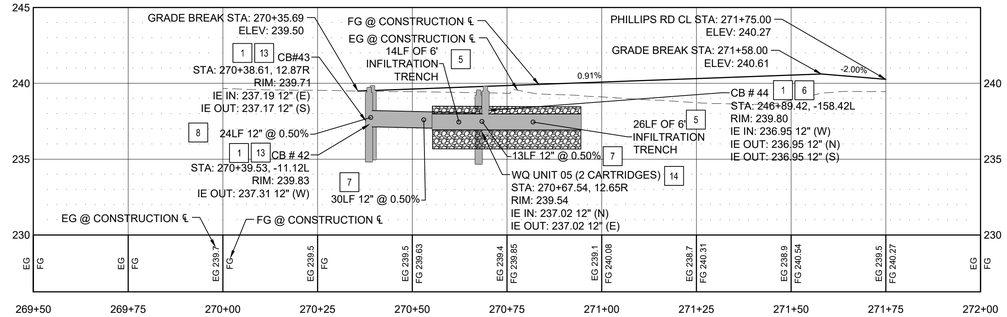
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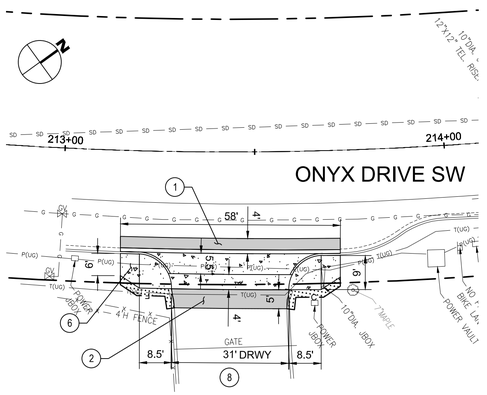




CONSTRUCTION NOTES:

1. HMA CL. 1/2" PG 58H-22 PAVEMENT. SEE ROADWAY SECTIONS.
3. HMA RAMP PER DETAIL ON SHEET CD1.
4. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER LAKEWOOD STANDARD PLAN FR-04.
5. CEMENT CONCRETE PEDESTRIAN CURB PER LAKEWOOD STANDARD PLAN FR-04.
6. CEMENT CONCRETE SIDEWALK PER LAKEWOOD STANDARD PLAN FR-03.
7. BARK MULCH - 3" DEPTH.
21. COBBLE SURFACING PER DETAIL ON SHEET CD1.
31. HMA WEDGE CURB PER LAKEWOOD STANDARD PLAN FR-04.





STORM DRAINAGE NOTES:

1. CATCH BASIN TYPE 1 PER WSDOT STANDARD PLAN B-5.20-02. FURNISH WITH VANED GRATE PER WSDOT STANDARD PLAN B-30.30-03 UNLESS OTHERWISE NOTED.
4. STORMWATER INTERCEPTOR TRENCH PER DETAIL.
5. INFILTRATION TRENCH PER LAKEWOOD STANDARD PLAN SW-03. POTHOLE TO LOCATE UTILITIES IN AREA PRIOR TO BEGINNING STORM DRAINAGE WORK AND COORDINATE FINAL LOCATION OF INFILTRATION TRENCH WITH THE ENGINEER.
6. FURNISH AND INSTALL RECTANGULAR SOLID METAL COVER PER WSDOT STANDARD PLAN B-30.20-04.
7. 12" SCHEDULE A STORM SEWER PIPE.
8. 12" DI STORM SEWER PIPE.
13. FURNISH AND INSTALL BI-DIRECTIONAL VANED GRATE PER WSDOT STANDARD PLAN B-30.40-03.
14. WATER QUALITY TREATMENT UNIT.

PIPE CROSSING TABLE

#	UPPER PIPE	INVERT	LOWER PIPE	CROWN	DIFFERENCE
3	STORM	237.28	* EX POWER	235.88	1.39
10	STORM	237.28	* EX COMM	235.86	1.42
24	STORM	237.21	EX SEWER	233.17	4.04
25	STORM	236.97	EX SEWER	232.67	4.30
33	STORM	237.11	*EX GAS	236.90	0.21

* EXISTING UTILITY DEPTH ASSUMED AT 3' COVER. POTHOLE PRIOR TO CONSTRUCTION TO VERIFY DEPTH AND LOCATION.

DRIVEWAY TABLE

CL STA	TYPE	WIDTH	UP STA RAMP L	DOWN STA RAMP L	APPROACH L	APPROACH MATERIAL
270+55.67	4	17'	-	-	13'	CONC.
270+56.13	4	17'	-	-	12'	CONC.

DRIVEWAY NOTES:
1. HMA APPROACH PER DETAIL ON SHEET CD2.
2. CEMENT CONC. APPROACH PER DETAIL ON SHEET CD2.
3. DRIVEWAY TYPE 1,3, OR 4 PER WSDOT STD PLAN F-80. 10-04
4. MAINTAIN DEPRESSED CURB BETWEEN DRIVEWAYS

5 2.5 0 5 VERT.
SCALE: 1"= 5'

20 10 0 20 HORIZ.
SCALE: 1"=20'

Know what's **below.** **Call** before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

bcra
T 253.627.4367 F 253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

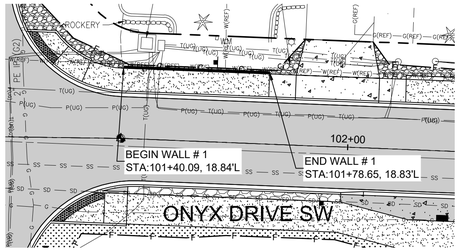
CITY OF LAKEWOOD, WA 1996

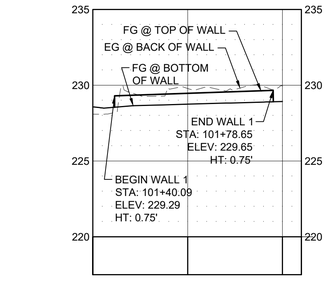
SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: DRIVEWAYS AT STA 205+25 AND STA 213+50

PROJECT 302.0138
DRAWING PP17
SHEET 31 of 64

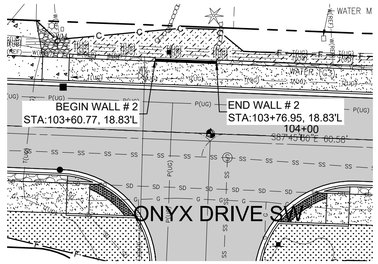
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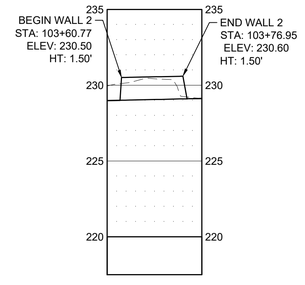




WALL 1

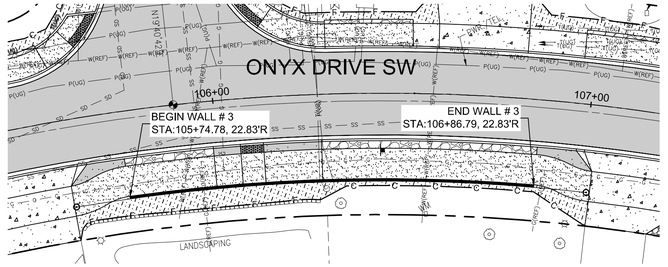
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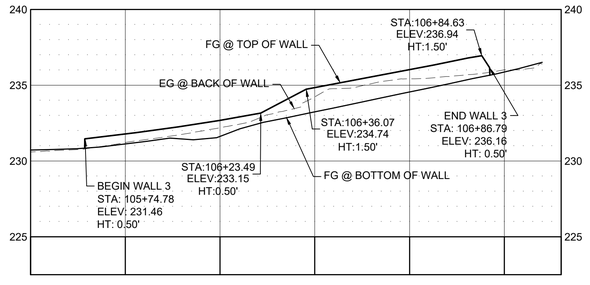




WALL 2

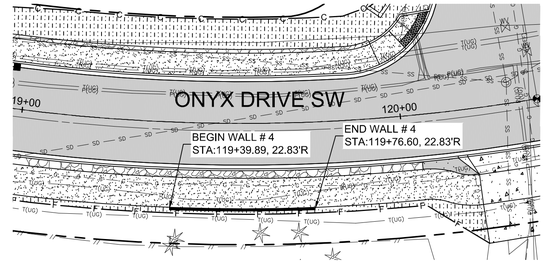
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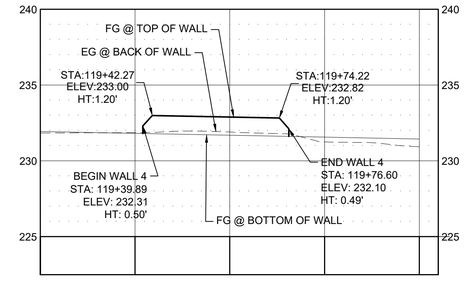




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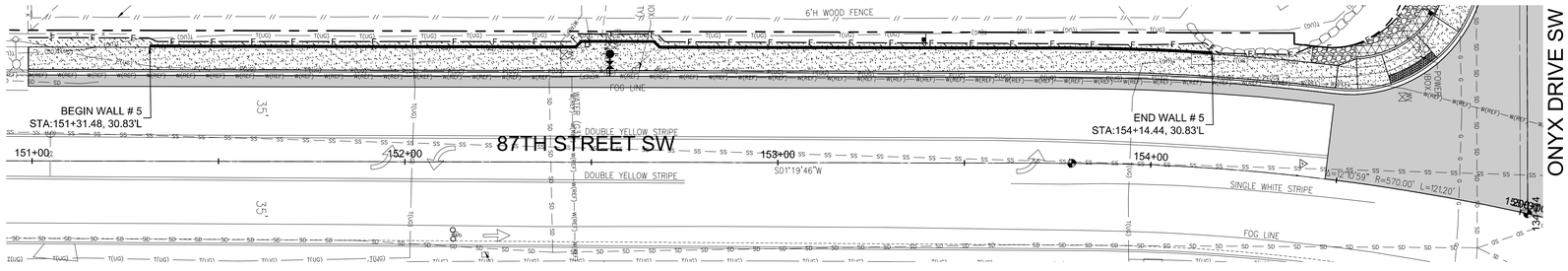
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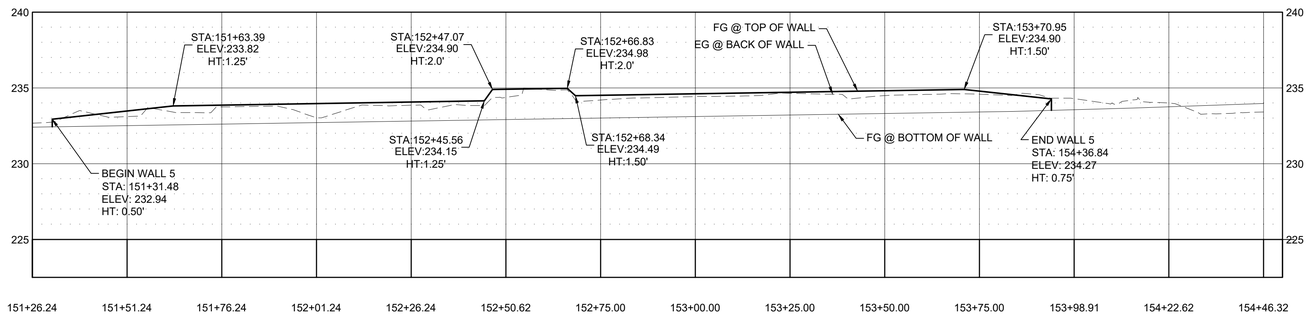




WALL 4

SCALE: SHOWN (4)





WALL 5

SCALE: SHOWN (5)

5 2.5 0 5 VERT.
SCALE: 1"= 5'

20 10 0 20 HORIZ.
SCALE: 1"=20'

811 Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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T 253.627.4367 F 253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

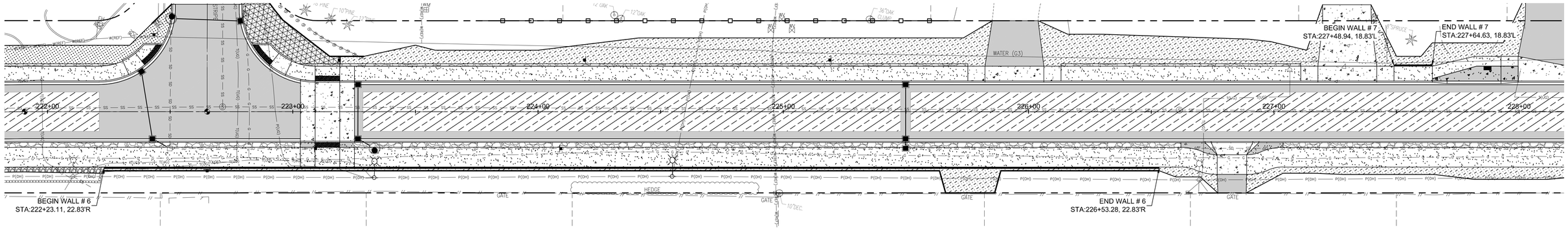
CITY OF LAKEWOOD, WA 1996

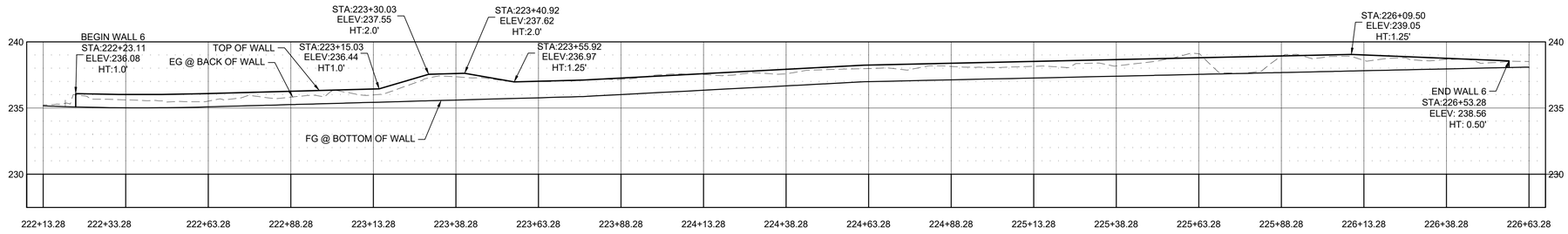
SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: WALL PROFILES WEST

PROJECT: 302.0138
DRAWING: WP1
SHEET: 32 of 64

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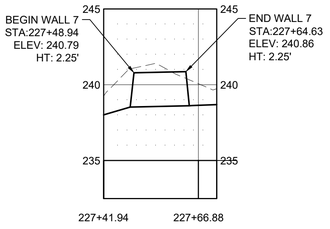




WALL 6

SCALE: NTS

6



WALL 7

SCALE: NTS

7

5 2.5 0 5 VERT.

SCALE: 1"= 5'

5 2.5 0 5 HORIZ.

SCALE: 1"= 5'

Know what's **below.** **Call** before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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CITY OF LAKEWOOD, WA 1996

SHANNON MARIE PODGORSKI, STATE OF WASHINGTON, 58052, REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS

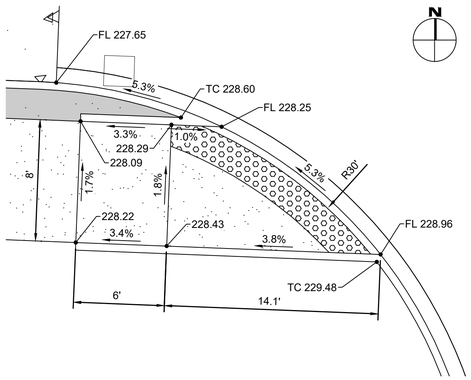
DRAWING NAME: WALL PROFILES EAST

PROJECT: 302.0138

DRAWING: WP2

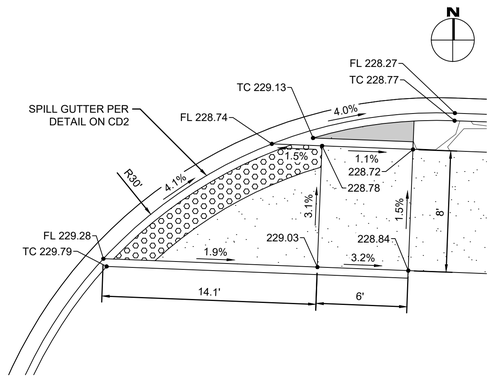
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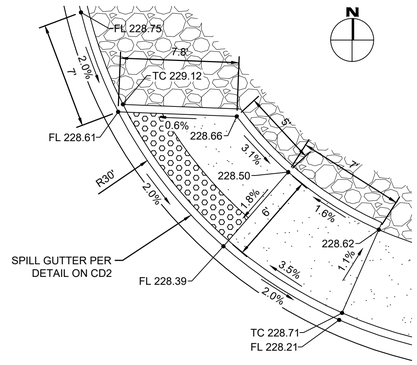
97TH AVE SW (SW CURB RAMP) 1

SCALE: 1" = 5'



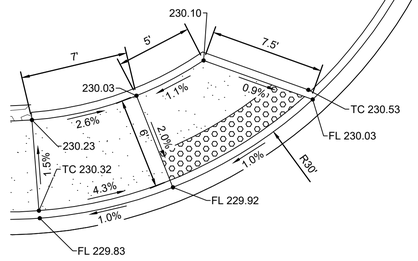
97TH AVE SW (SE CURB RAMP) 2

SCALE: 1" = 5'



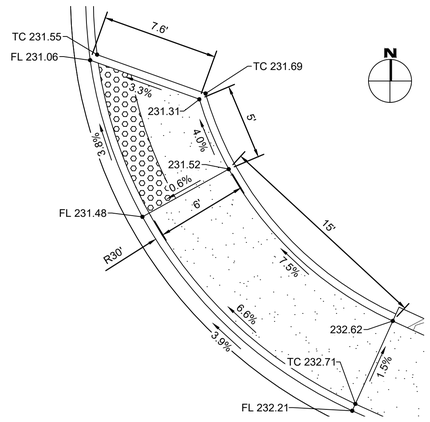
97TH AVE SW (NE CURB RAMP) 3

SCALE: 1" = 5'



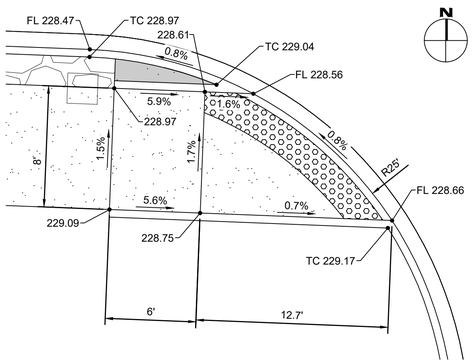
95TH AVE SW (NW CURB RAMP) 4

SCALE: 1" = 5'



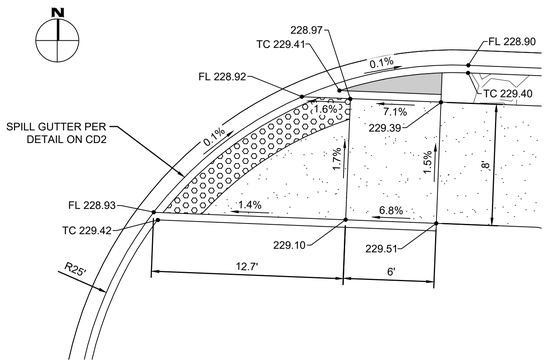
95TH AVE SW (NE CURB RAMP) 5

SCALE: 1" = 5'



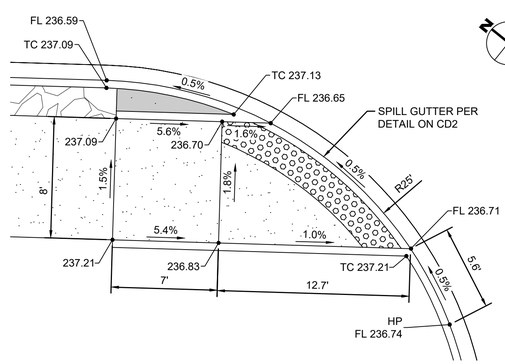
96TH AVE SW (SW CURB RAMP) 6

SCALE: 1" = 5'



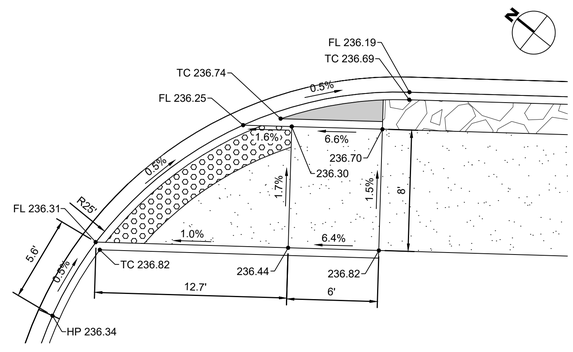
96TH AVE SW (SE CURB RAMP) 7

SCALE: 1" = 5'



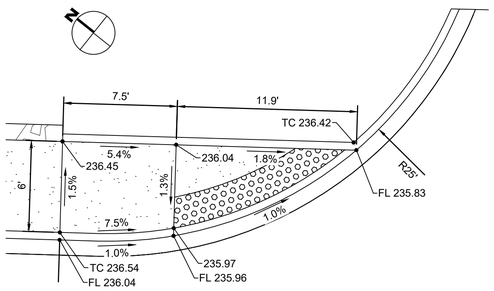
94TH AVE SW (SW CURB RAMP) 8

SCALE: 1" = 5'



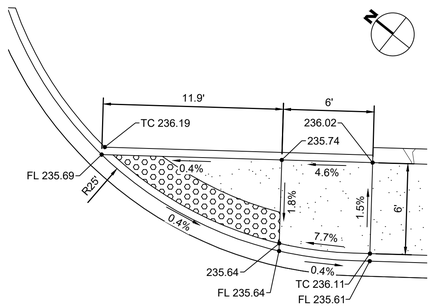
94TH AVE SW (SE CURB RAMP) 9

SCALE: 1" = 5'



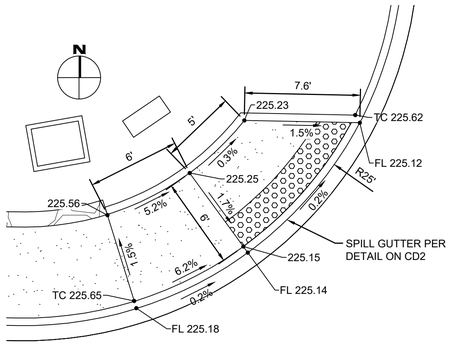
93RD AVE SW (NW CURB RAMP) 10

SCALE: 1" = 5'



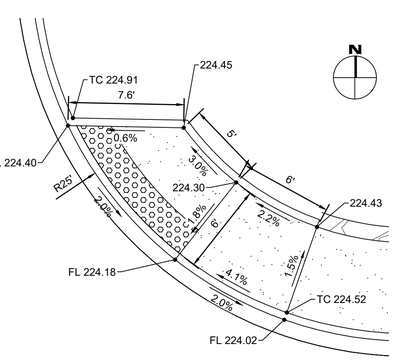
93RD AVE SW (NE CURB RAMP) 11

SCALE: 1" = 5'



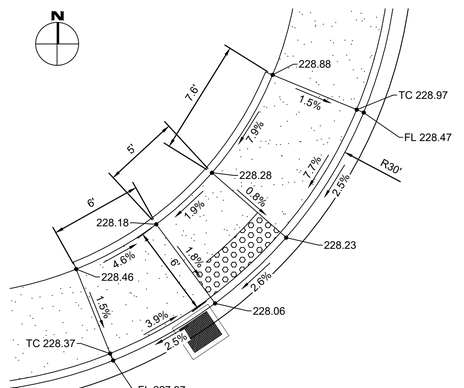
90TH AVE SW (NW CURB RAMP) 12

SCALE: 1" = 5'



90TH AVE SW (NE CURB RAMP) 13

SCALE: 1" = 5'



97TH AVE SW (NW CURB RAMP) 14

SCALE: NTS

811 Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

bcra
T 253.627.4367 F 253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

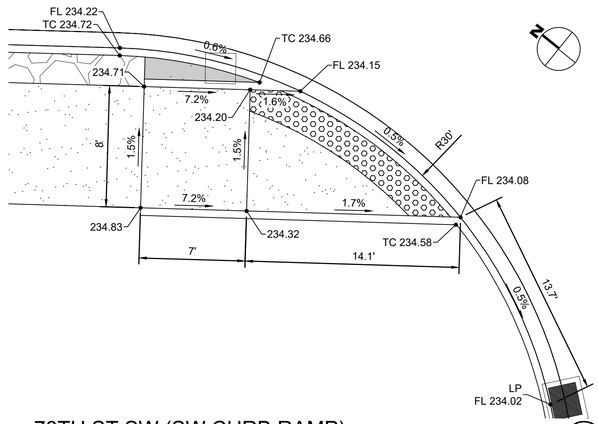
CITY OF LAKEWOOD, WA 1996

SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: CURB RAMP DETAILS

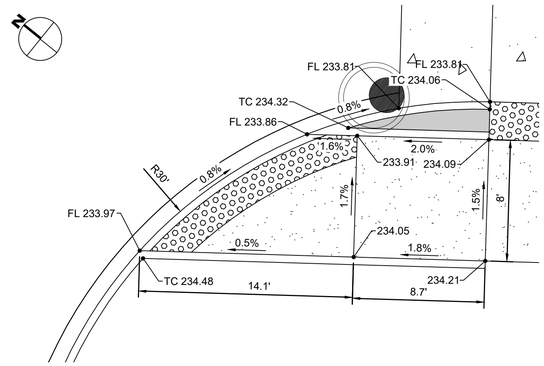
PROJECT: 302.0138
DRAWING: DG1
SHEET: 34 of 64

P:\19000\19046.00.00 - Onyx Dr Improvements\Civil\07-CAD\BCRA\Production Dwgs\19046C-DTGR.dwg 2/12/20



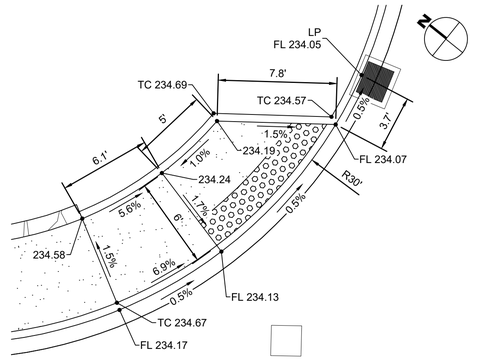
78TH ST SW (SW CURB RAMP) 1

SCALE: 1" = 5'



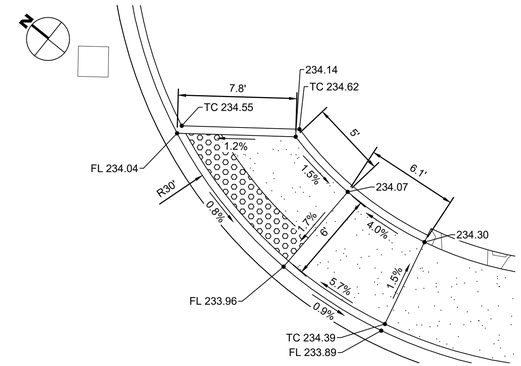
78TH ST SW (SE CURB RAMP) 2

SCALE: 1" = 5'



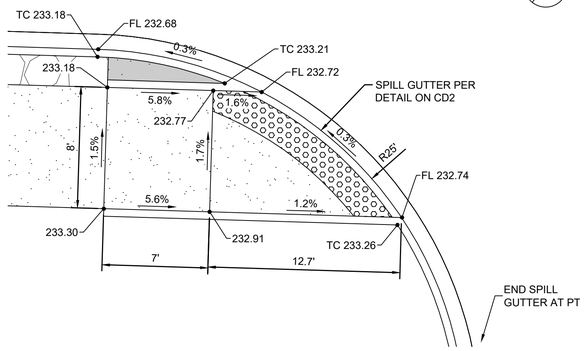
78TH ST SW (NW CURB RAMP) 3

SCALE: 1" = 5'



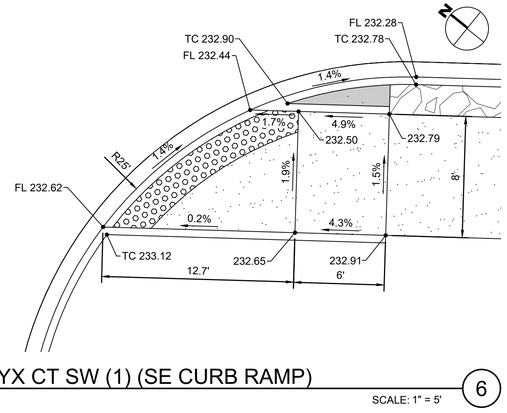
78TH ST SW (NE CURB RAMP) 4

SCALE: 1" = 5'



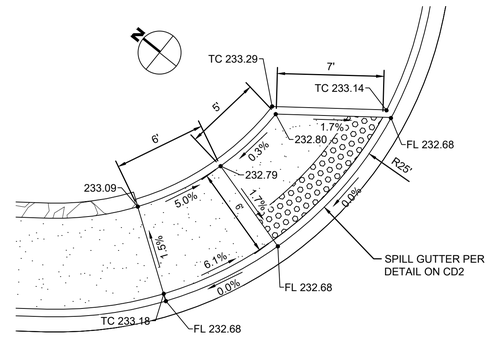
ONYX CT SW (1) (SW CURB RAMP) 5

SCALE: 1" = 5'



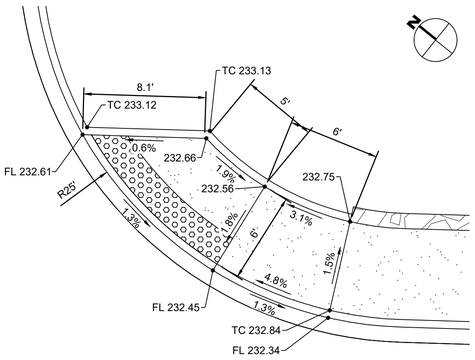
ONYX CT SW (1) (SE CURB RAMP) 6

SCALE: 1" = 5'



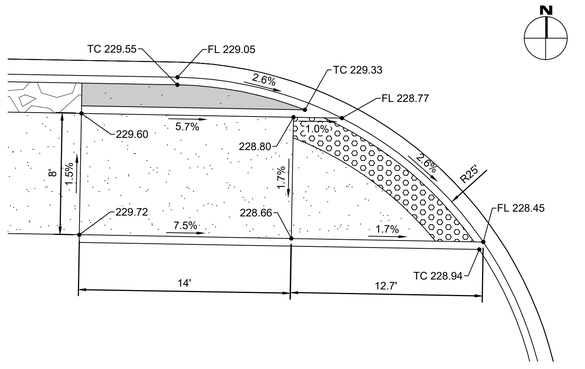
ONYX CT SW (1) (NW CURB RAMP) 7

SCALE: 1" = 5'



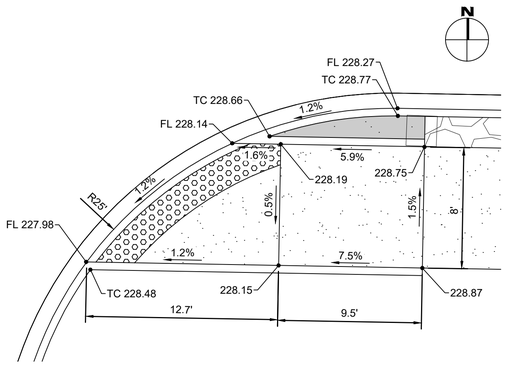
ONYX CT SW (1) (NE CURB RAMP) 8

SCALE: 1" = 5'



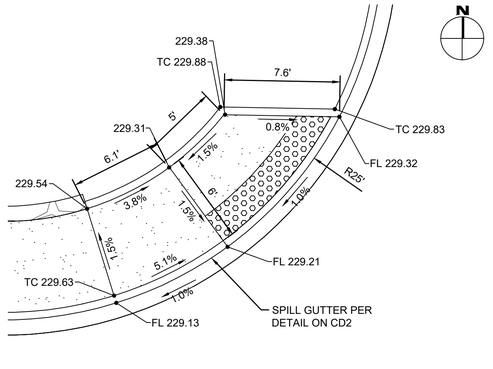
ONYX CT SW (2) (SW CURB RAMP) 9

SCALE: 1" = 5'



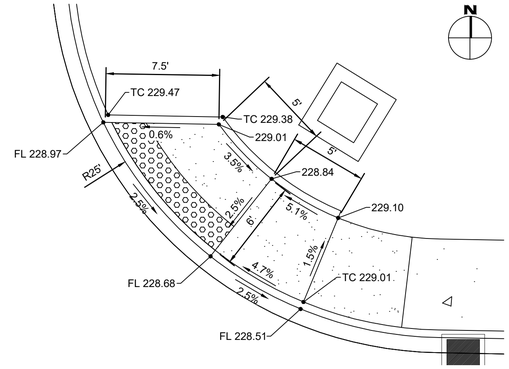
ONYX CT SW (2) (SE CURB RAMP) 10

SCALE: 1" = 5'



ONYX CT SW (2) (NW CURB RAMP) 11

SCALE: 1" = 5'



ONYX CT SW (2) (NE CURB RAMP) 12

SCALE: 1" = 5'

811 Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

bcra
T 253.627.4367 F 253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

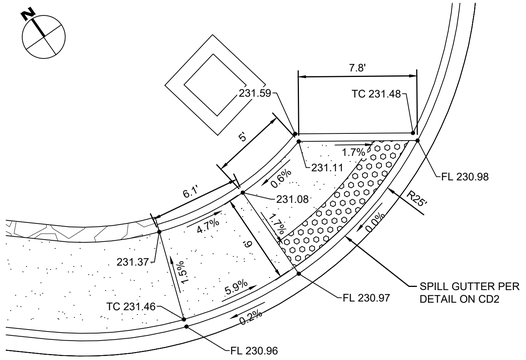
CITY OF LAKEWOOD, WA 1996

SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: CURB RAMP DETAILS

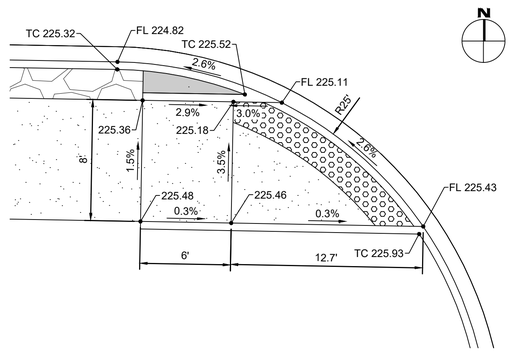
PROJECT 302.0138
DRAWING DG2
SHEET 35 of 64

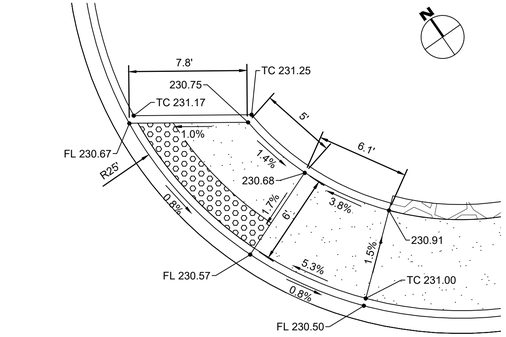
P:\19000\19046.00.00 - Onyx Dr Improvements\Civil\07-CAD\BCRA\Production Dwgs\19046C-DTGR.dwg 2/12/20



ONYX DR CT SW (NW CURB RAMP) 1

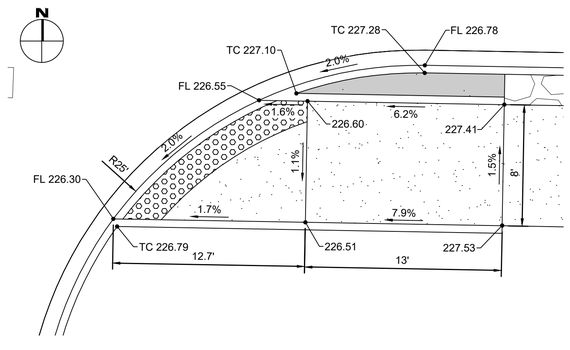
SCALE: 1" = 5'

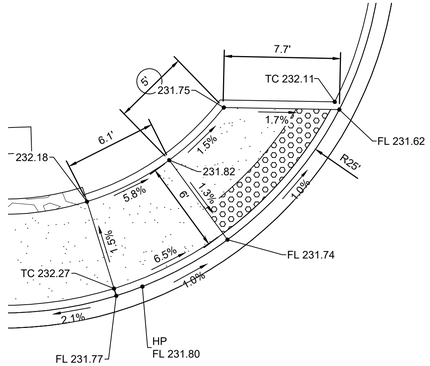




ONYX DR CT SW (NE CURB RAMP) 2

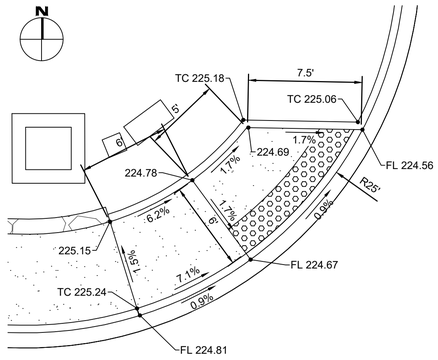
SCALE: 1" = 5'

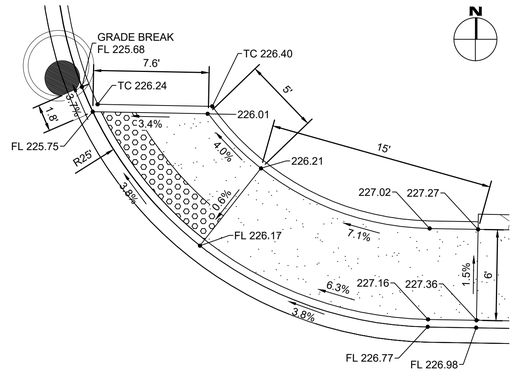




88TH AVE SW (NW & NE CURB RAMPS) 3

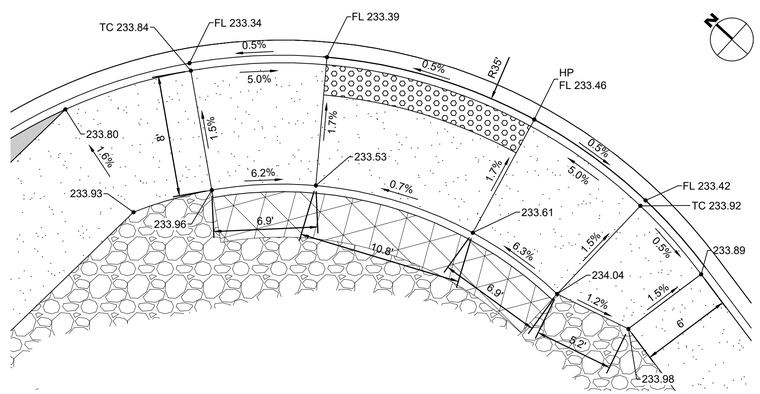
SCALE: 1" = 5'





89TH AVE SW (SW CURB RAMP) 4

SCALE: 1" = 5'

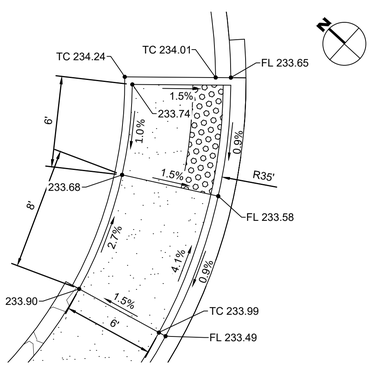


ONYX DR SW (SW CURB RAMP) 8

SCALE: 1" = 5'

89TH AVE SW (SE CURB RAMP) 5

SCALE: 1" = 5'

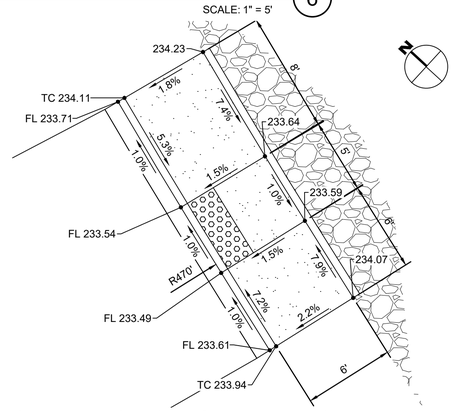


ONYX DR SW (NW CURB RAMP) 9

SCALE: 1" = 5'

89TH AVE SW (NW CURB RAMP) 6

SCALE: 1" = 5'

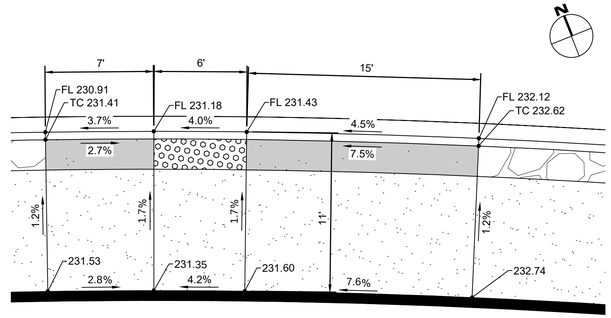


ONYX DR SW (NE CURB RAMP) 10

SCALE: 1" = 5'

89TH AVE SW (NE CURB RAMP) 7

SCALE: 1" = 5'



95TH AVE SW (SOUTH CURB RAMP) 11

SCALE: 1"=5'

811 Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

bcra
T 253.627.4367 F 253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

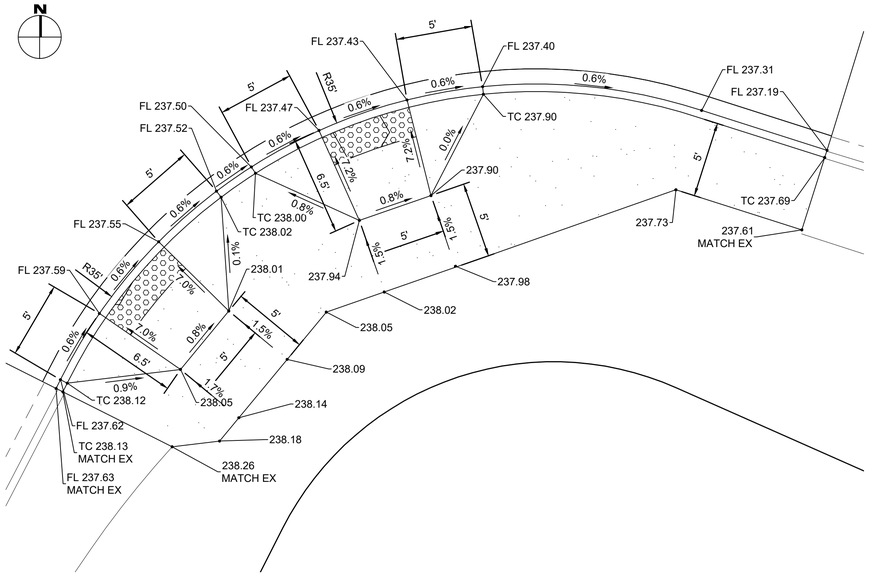
CITY OF LAKEWOOD, WA 1996

SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER otherwise

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: CURB RAMP DETAILS

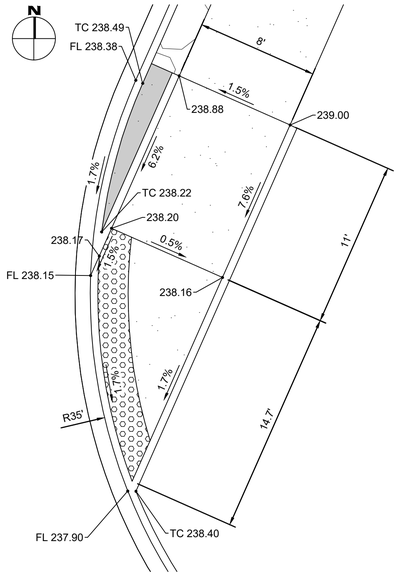
PROJECT: 302.0138
DRAWING: DG3
SHEET: 36 of 64

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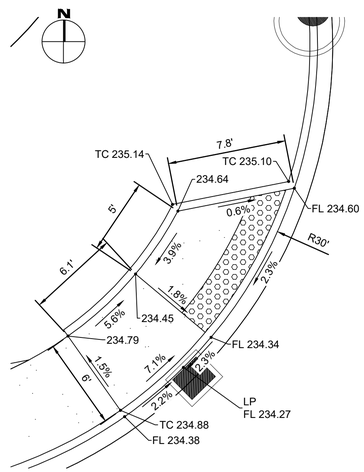
GARNET LN SW (SE CURB RAMP) 1

SCALE: 1" = 5'



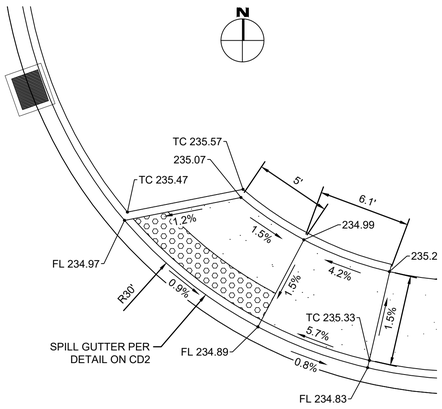
GARNET LN SW (NE CURB RAMP) 2

SCALE: 1" = 5'



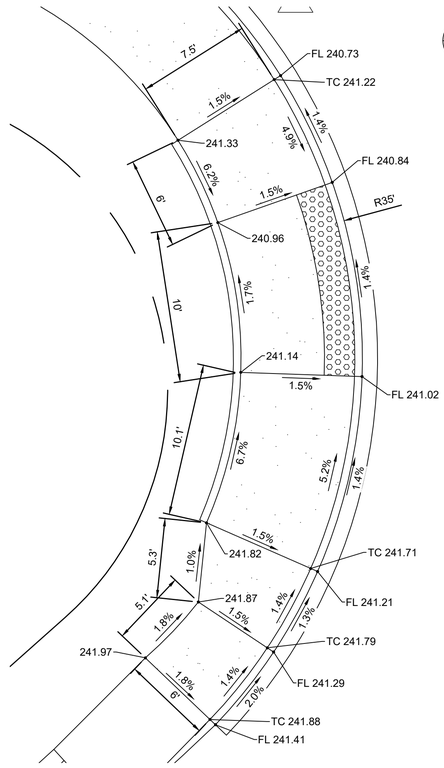
CORAL LN SW (NW CURB RAMP) 3

SCALE: 1" = 5'



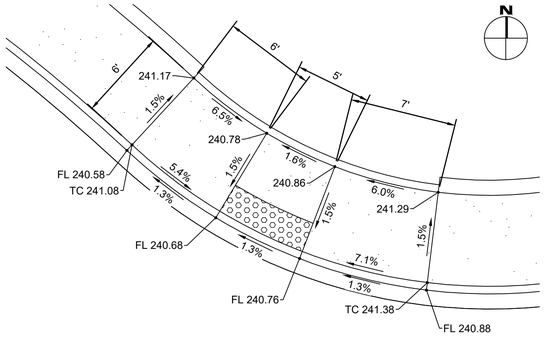
CORAL LN SW (NE CURB RAMP) 4

SCALE: 1" = 5'



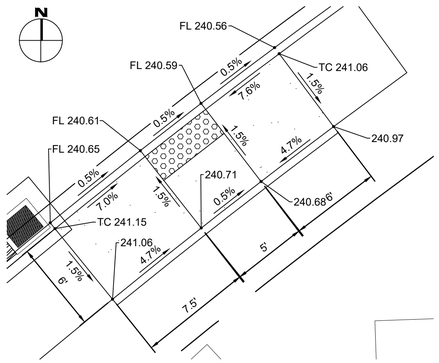
PHILLIPS RD SW (NW CURB RAMP) 7

SCALE: 1" = 5'



PHILLIPS RD SW (NE CURB RAMP) 5

SCALE: 1" = 5'



PHILLIPS RD SW (SE CURB RAMP) 6

SCALE: 1" = 5'

811
Know what's below.
Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: JAMES BENTON DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

bcra
T 253.627.4367 F 253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

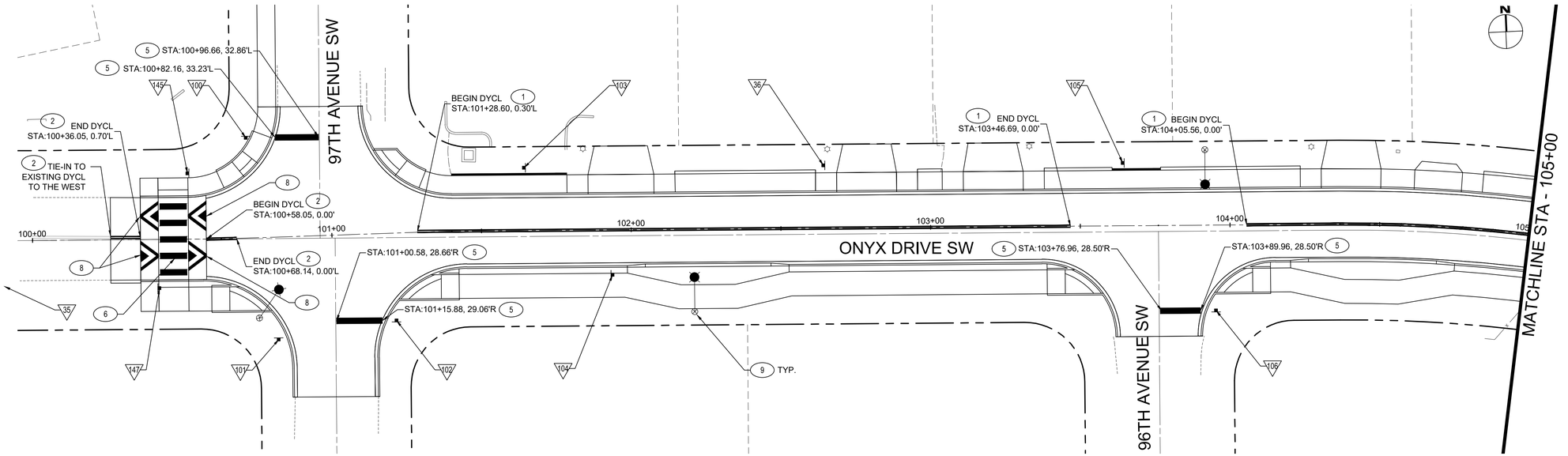
CITY OF LAKEWOOD, WA 1996

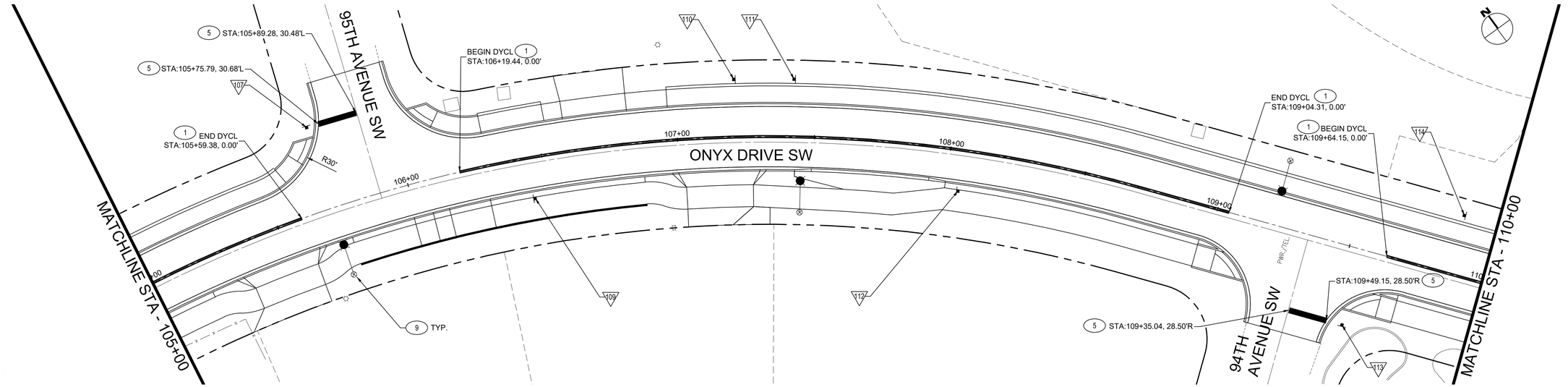
obtrias

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: CURB RAMP DETAILS

PROJECT: 302.0138
DRAWING: DG4
SHEET: 37 of 64

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PAVEMENT MARKING NOTES:

1. YELLOW PROFILED PLASTIC DOUBLE CENTERLINE WITH TYPE 2YY RPMS PER WSDOT STANDARD PLANS M-20.10-02, M-20.20-02, AND M-20.30-04.
2. YELLOW PAINTED DOUBLE CENTERLINE WITH TYPE 2YY RPMS PER WSDOT STANDARD PLANS M-20.10-02 AND M-20.30-04.
5. 2' WIDE PLASTIC STOP BAR PER WSDOT STANDARD PLAN M-15.10-01 AND LAKEWOOD STANDARD PLAN PS-05.
6. CROSSWALK PER WSDOT STANDARD PLAN M-15.10-01 AND LAKEWOOD STANDARD PLAN PS-05.
8. SPEED TABLE PAVEMENT MARKINGS PER LAKEWOOD STANDARD PLAN RW-09.
9. ILLUMINATION POLE. SEE ILLUMINATION PLANS.

SIGN SCHEDULE

SIGN NO.	MUTCD	SIGN TYPE	STA/OFF	SIZE	NOTES
35	W13-1	RAISED CROSSWALK AHEAD/ADVISED SPEED (20 MPH)		30X30 18X18	INSTALL SIGN 150 FT WEST OF RAISED CROSSWALK, COORDINATE LOCATION WITH ENGINEER
36	W13-1	RAISED CROSSWALK AHEAD/ADVISED SPEED (20 MPH)	102+64.32, 21.00	30X30 18X18	
100	R1-1	STOP STREET NAME SIGN (X2)	100+72.37, 33.48	30X30 8X24	"97TH AV SW" & "ONYX DR SW"
101	W14-1	DEAD END	100+81.07, 34.16	24X24	
102	R1-1	STOP	101+20.59, 29.18	30X30	
103	W1-1L W13-1	CURVE AHEAD (L) \ ADVISED SPEED (20 MPH)	101+64.32, 21.00	24X24 18X18	

SIGN SCHEDULE

SIGN NO.	MUTCD	SIGN TYPE	STA/OFF	SIZE	NOTES
104	R2-1	SPEED LIMIT (25 MPH)	101+93.62, 15.00	18X24	
105	W15-1	PLAYGROUND AHEAD	103+64.32, 21.00	24X24	
106	R1-1	STOP STREET NAME SIGN (X2)	103+95.10, 28.50	30X30 8X24	"96TH AV SW" & "ONYX DR SW"
107	R1-1	STOP STREET NAME SIGN (X2)	105+71.53, 30.83	30X30 8X24	"95TH AV SW" & "ONYX DR SW"
109	S3-1	SCHOOL BUS STOP AHEAD	106+44.86, 15.00	30X30	
110	W1-8	CHEVRON	107+21.08, 21.00	18X24	

NOTES:
1. INSTALL SIGNS ON STEEL POST STREET SIGN SUPPORT PER LAKEWOOD STANDARD PLAN PS-03.
2. PROVIDE STREET NAME SIGNS PER LAKEWOOD STANDARD PLAN PS-01.

SIGN SCHEDULE

SIGN NO.	MUTCD	SIGN TYPE	STA/OFF	SIZE	NOTES
111	W1-8	CHEVRON	107+42.22, 21.00	18X24	
112	W2-2	THREE WAY INTERSECTION AHEAD	108+04.73, 15.00	24X24	
113	R1-1	STOP STREET NAME SIGN (X2)	109+55.06, 28.50	30X30 8X24	"94TH AV SW" & "ONYX DR SW"
114	R1-1L	TURN AHEAD (L)	109+87.39, 22.00	24X24	
145	W11-2 W16-7P	PEDESTRIAN CROSSING/DOWNWARD ARROW	100+51.88, 22.00	30X30 24X12	
147	W11-2 W16-7P	PEDESTRIAN CROSSING/DOWNWARD ARROW	100+42.22, 16.25	30X30 24X12	

SCALE: 1"=20'

Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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T 253.627.4367 F 253.627.4395 WWW.BCRADESIGN.COM
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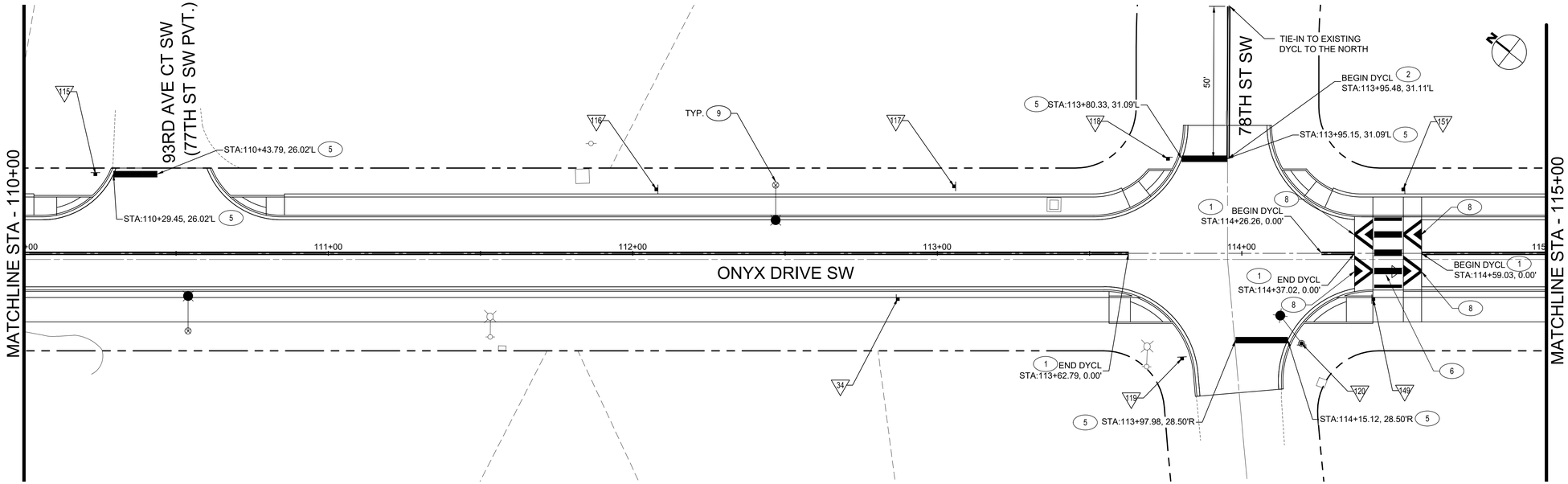
CITY OF LAKEWOOD, WA 1996

SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: PAVEMENT MARKING AND SITE PLAN - STA 100+00 TO 110+00

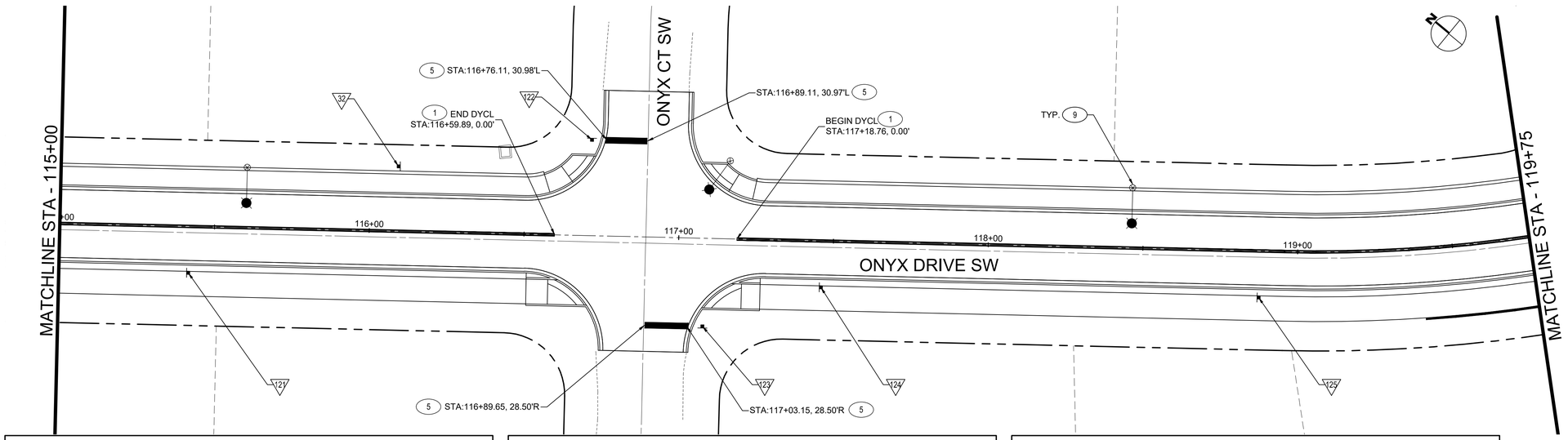
PROJECT: 302.0138
DRAWING: PM1
SHEET: 38 of 64

P:\19000\19046.00.00 - Onyx Dr Improvements\Civil\07-CAD\BCRA\Production Dwgs\19046C CHAN-W.dwg 2/12/20



PAVEMENT MARKING NOTES:

1. YELLOW PROFILED PLASTIC DOUBLE CENTERLINE WITH TYPE 2YY RPMS PER WSDOT STANDARD PLANS M-20.10-02, M-20.20-02, AND M-20.30-04.
2. YELLOW PAINTED DOUBLE CENTERLINE WITH TYPE 2YY RPMS PER WSDOT STANDARD PLANS M-20.10-02 AND M-20.30-04.
5. 2' WIDE PLASTIC STOP BAR PER WSDOT STANDARD PLAN M-15.10-01 AND LAKEWOOD STANDARD PLAN PS-05.
6. CROSSWALK PER WSDOT STANDARD PLAN M-15.10-01 AND LAKEWOOD STANDARD PLAN PS-05.
8. SPEED TABLE PAVEMENT MARKINGS PER LAKEWOOD STANDARD PLAN RW-09.
9. ILLUMINATION POLE. SEE ILLUMINATION PLANS.



SIGN SCHEDULE

SIGN NO.	MUTCD	SIGN TYPE	STA/OFF	SIZE	NOTES
32	W13-1	RAISED CROSSWALK AHEAD/ADVISED SPEED (20 MPH)	116+09.03, 21.00	30X30 18X18	
34	W13-1	RAISED CROSSWALK AHEAD/ADVISED SPEED (20 MPH)	112+87.02, 15.00	30X30 18X18	
115	R1-1	STOP STREET NAME SIGN (X2)	110+23.49, 26.02	30X30 8X24	"77TH AV SW" & "ONYX DR SW"
116	R2-1	SPEED LIMIT (25 MPH)	112+07.74, 21.00	18X24	
117	S3-1	SCHOOL BUS STOP AHEAD	113+05.52, 22.00	30X30	

SIGN SCHEDULE

SIGN NO.	MUTCD	SIGN TYPE	STA/OFF	SIZE	NOTES
118	R1-1	STOP STREET NAME SIGN (X2)	113+75.74, 31.09	30X30 8X24	"78TH AV SW" & "ONYX DR SW"
119	W14-1	DEAD END	113+80.39, 34.50	24X24	
120	R1-1	STOP	114+19.63, 29.57	30X30	MOUNT ON LIGHT POLE
121	R1-1	SPEED LIMIT (25 MPH)	115+41.83, 15.00	30X30	
122	R1-1	STOP STREET NAME SIGN (X2)	116+71.26, 30.98	30X30 8X24	"ONYX CT SW" & "ONYX DR SW"

NOTES:
1. INSTALL SIGNS ON STEEL POST STREET SIGN SUPPORT PER LAKEWOOD STANDARD PLAN PS-03.
2. PROVIDE STREET NAME SIGNS PER LAKEWOOD STANDARD PLAN PS-01.

SIGN SCHEDULE

SIGN NO.	MUTCD	SIGN TYPE	STA/OFF	SIZE	NOTES
123	R1-1	STOP	117+08.30, 28.50	30X30	
124	R1-1L	TURN AHEAD (L)	117+46.25, 15.00	24X24	
125	W2-2	THREE WAY INTERSECTION AHEAD	118+87.72, 15.00	24X24	
149	W11-2 W16-7P	PEDESTERIAN CROSSING/DOWNWARD ARROW	114+43.20, 15.00	30X30 24X12	
157	W11-2 W16-7P	PEDESTERIAN CROSSING/DOWNWARD ARROW	114+53.03, 21.00	30X30 24X12	

20 10 0 20
SCALE: 1"=20'

Know what's **below.** **Call** before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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T 253.627.4367 F 253.627.4395 WWW.BCRADESIGN.COM
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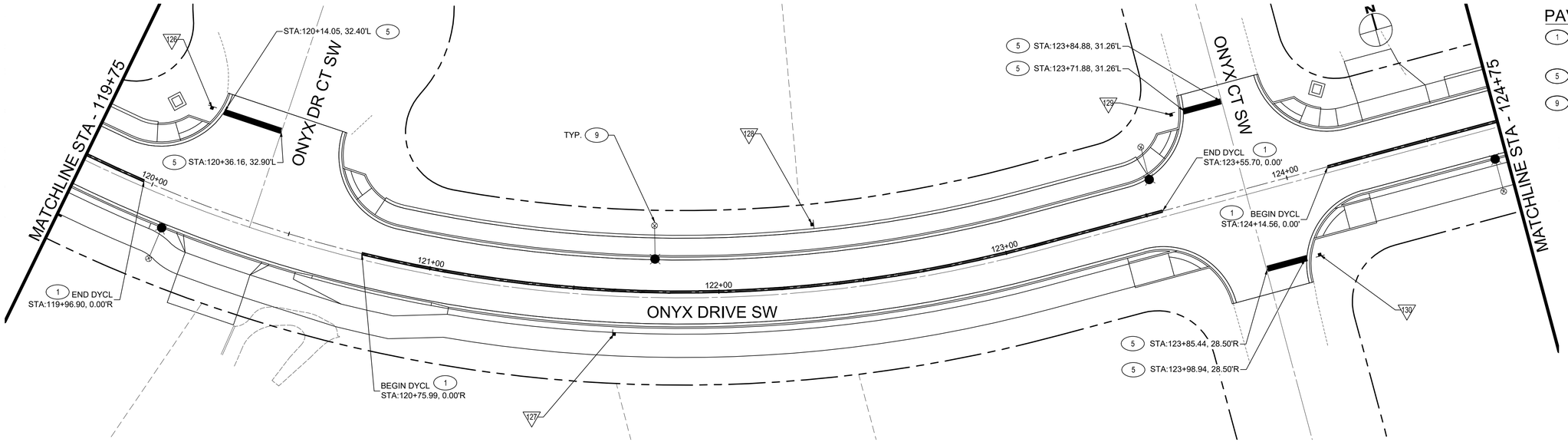
CITY OF LAKEWOOD, WA 1996

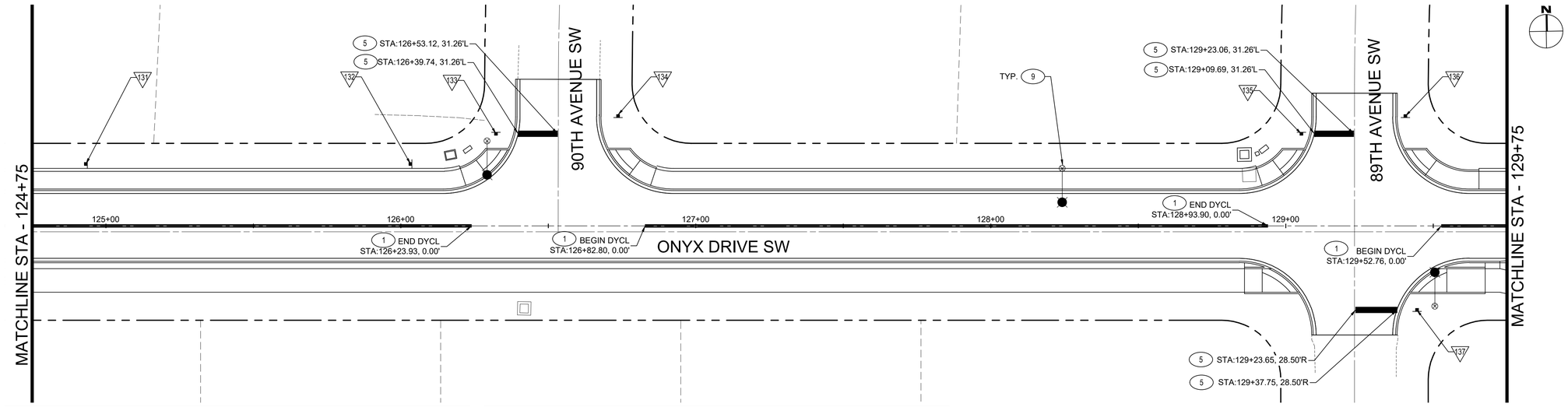
SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: PAVEMENT MARKING AND SITE PLAN - STA 110+00 TO 119+75

PROJECT: 302.0138
DRAWING: PM2
SHEET: 39 of 64

P:\19000\19046.00.00 - Onyx Dr Improvements\Civil\07-CAD\BCRA\Production Dwgs\19046C CHAN-W.dwg 2/12/20





PAVEMENT MARKING NOTES:

1. YELLOW PROFILED PLASTIC DOUBLE CENTERLINE WITH TYPE 2YY RPMS PER WSDOT STANDARD PLANS M-20.10-02, M-20.20-02, AND M-20.30-04.
5. 2' WIDE PLASTIC STOP BAR PER WSDOT STANDARD PLAN M-15.10-01 AND LAKEWOOD STANDARD PLAN PS-05.
9. ILLUMINATION POLE. SEE ILLUMINATION PLANS.

SIGN SCHEDULE

SIGN NO.	MUTCD	SIGN TYPE	STA/OFF	SIZE	NOTES
126	R1-1	STOP STREET NAME SIGN (X2)	120+09.30, 32.17	30X30 8X24	"ONYX DR CT SW" & "ONYX DR SW"
127	W2-1	FOUR WAY INTERSECTION AHEAD	121+64.61, 15.00	24X24	
128	W2-2	THREE WAY INTERSECTION AHEAD	122+34.27, 21.00	24X24	
129	R1-1	STOP	123+67.11, 31.26	30X30	
130	R1-1	STOP STREET NAME SIGN (X2)	124+04.09, 28.50	30X30 8X24	"ONYX CT SW" & "ONYX DR SW"
131	R1-1R	TURN AHEAD (R)	124+93.20, 21.00	24X24	

SIGN SCHEDULE

SIGN NO.	MUTCD	SIGN TYPE	STA/OFF	SIZE	NOTES
132	W2-1	FOUR WAY INTERSECTION AHEAD	126+03.26, 21.00	24X24	
133	R1-1	STOP STREET NAME SIGN (X2)	126+32.22, 31.24	30X30 8X24	"90TH AV SW" & "ONYX DR SW"
134	W14-1	DEAD END	126+73.63, 37.24	24X24	
135	R1-1	STOP	129+05.30, 31.22	30X30	
136	W14-1	DEAD END	129+40.58, 37.22	24X24	
137	R1-1	STOP STREET NAME SIGN (X2)	129+44.49, 28.50	30X30 8X24	"89TH AV SW" & "ONYX DR SW"

NOTES:
1. INSTALL SIGNS ON STEEL POST STREET SIGN SUPPORT PER LAKEWOOD STANDARD PLAN PS-03.
2. PROVIDE STREET NAME SIGNS PER LAKEWOOD STANDARD PLAN PS-01.

5 2.5 0 5 VERT.
SCALE: 1"= 5'

20 10 0 20 HORIZ.
SCALE: 1"=20'

Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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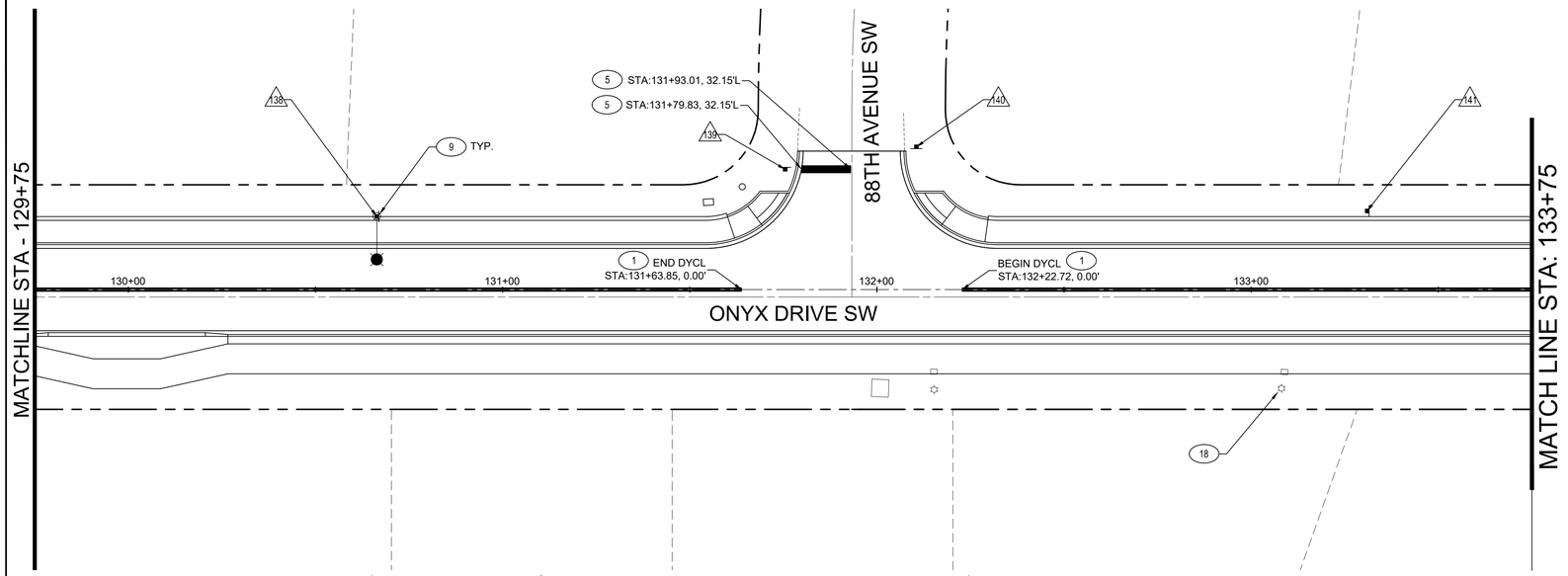
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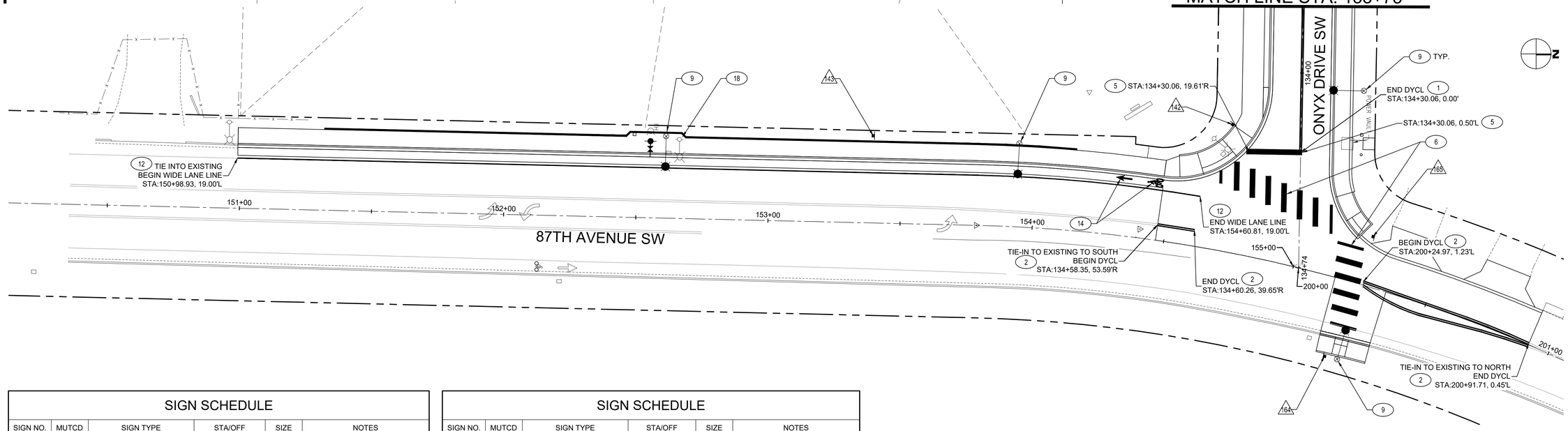
SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: PAVEMENT MARKING AND SITE PLAN - STA 119+75 TO 129+75

PROJECT 302.0138
DRAWING PM3
SHEET 40 of 64

P:\19000\19046.00.00 - Onyx Dr Improvements\Civil\07-CAD\BCRA\Production Dwgs\19046C CHAN-W.dwg 2/12/20





PAVEMENT MARKING NOTES:

1. YELLOW PROFILED PLASTIC DOUBLE CENTERLINE WITH TYPE 2YY RPMS PER WSDOT STANDARD PLANS M-20.10-02, M-20.20-02, AND M-20.30-04.
2. YELLOW PAINTED DOUBLE CENTERLINE WITH TYPE 2YY RPMS PER WSDOT STANDARD PLANS M-20.10-02 AND M-20.30-04.
5. 2' WIDE PLASTIC STOP BAR PER WSDOT STANDARD PLAN M-15.10-01 AND LAKEWOOD STANDARD PLAN PS-05.
6. CROSSWALK PER WSDOT STANDARD PLAN M-15.10-01 AND LAKEWOOD STANDARD PLAN PS-05.
9. ILLUMINATION POLE. SEE ILLUMINATION PLANS.
12. WHITE PAINTED WIDE LANE LINE PER WSDOT STANDARD PLAN M-20.10-02.
14. PLASTIC BICYCLE LANE SYMBOL PER CITY OF LAKEWOOD STANDARD PLAN PS-09.
18. REMOVE EXISTING LIGHT POLE.

SIGN SCHEDULE

SIGN NO.	MUTCD	SIGN TYPE	STA/OFF	SIZE	NOTES
138		OAKBROOK WATER SUPPLY AREA	130+66.39, 19.52		MOUNT SALVAGED SIGN TO LIGHT POLE
139	R1-1	STOP STREET NAME SIGN (X2)	131+75.48, 32.15	30X30 8X24	"88TH AV SW" & "ONYX DR SW"
140	W14-1	DEAD END	132+10.56, 38.15	24X24	
141	R2-1	SPEED LIMIT (25 MPH)	133+30.97, 21.00	18X24	
142	R1-1	STOP STREET NAME SIGN (X2)	134+19.96, 25.87	30X30 8X24	"87TH AV SW" & "ONYX DR SW"
143	R2-1	SPEED LIMIT (30 MPH)	134+26.63, 161.75	18X24	

SIGN SCHEDULE

SIGN NO.	MUTCD	SIGN TYPE	STA/OFF	SIZE	NOTES
164	S1-1 W16-7P	SCHOOL CROSSING DOWNWARD ARROW	200+18.47, 29.88	30X30 24X12	
165	S1-1 W16-7P	SCHOOL CROSSING DOWNWARD ARROW	134+61.44, 27.99	30X30 24X12	

NOTES:
1. INSTALL SIGNS ON STEEL POST STREET SIGN SUPPORT PER LAKEWOOD STANDARD PLAN PS-03.
2. PROVIDE STREET NAME SIGNS PER LAKEWOOD STANDARD PLAN PS-01.

SCALE: 1"=20'

Know what's **below.** **Call** before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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CITY OF LAKEWOOD, WA 1996

SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

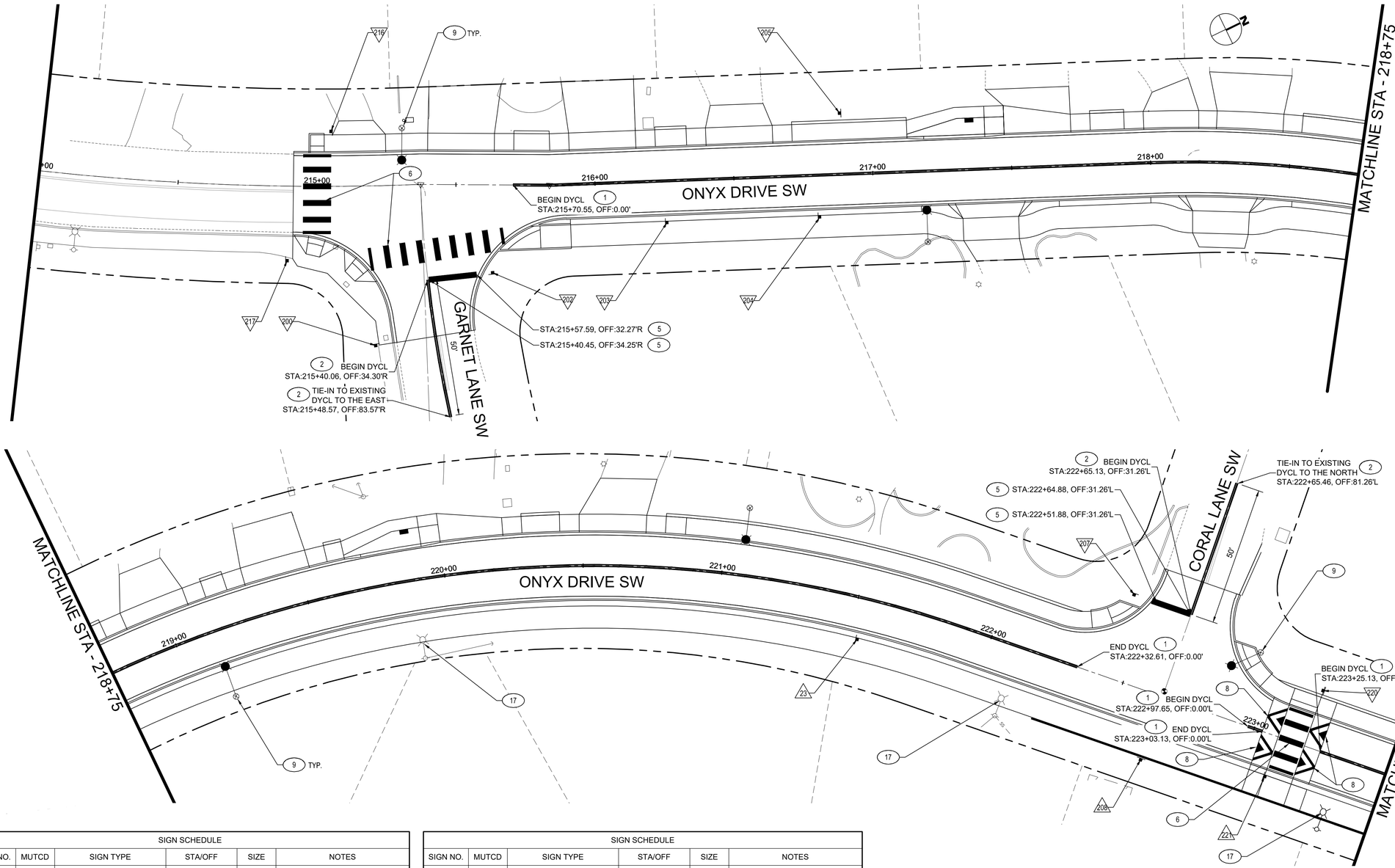
PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: PAVEMENT MARKING AND SITE PLAN - STA 129+75 TO 134+74

PROJECT: 302.0138
DRAWING: PM4
SHEET: 41 of 64

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PAVEMENT MARKING NOTES:

1. YELLOW PROFILED PLASTIC DOUBLE CENTERLINE WITH TYPE 2YY RPMS PER WSDOT STANDARD PLANS M-20.10-02, M-20.20-02, AND M-20.30-04.
2. YELLOW PAINTED DOUBLE CENTERLINE WITH TYPE 2YY RPMS PER WSDOT STANDARD PLANS M-20.10-02 AND M-20.30-04.
5. 2' WIDE PLASTIC STOP BAR PER WSDOT STANDARD PLAN M-15.10-01 AND LAKEWOOD STANDARD PLAN PS-05.
6. CROSSWALK PER WSDOT STANDARD PLAN M-15.10-01 AND LAKEWOOD STANDARD PLAN PS-05.
8. SPEED TABLE PAVEMENT MARKINGS PER LAKEWOOD STANDARD PLAN RW-09.
9. ILLUMINATION POLE. SEE ILLUMINATION PLANS.
17. REMOVE EXISTING LUMINARY FROM UTILITY POLE BY OTHERS. EXISTING UTILITY POLE AND GUY ANCHOR TO REMAIN.



SIGN SCHEDULE					
SIGN NO.	MUTCD	SIGN TYPE	STA/OFF	SIZE	NOTES
23	W13-1	SPEED TABLE AHEAD/ADVISED SPEED (20MPH)	221+53.13, 15.00	30X30 18X18	
200	R7-9	NO PARKING BIKE LANE	215+19.95, 57.43	12X18	
202	R1-1	STOP STREET NAME SIGN (X2)	215+63.35, 31.61	30X30 8X24	"GARNET LN SW" & "ONYX DR SW"
203	W1-1R	TURN AHEAD (R)	216+25.30, 15.00	24X24	
204	R2-1 S5-2	SPEED LIMIT (30 MPH) \ END SCHOOL ZONE	216+80.27, 15.00	18X24 18X12	
205	S5-1	SCHOOL SPEED LIMIT (20 MPH) FLASHING	216+88.83, 22.00	24X48	RELOCATE EXISTING SIGN TO A NEW FOUNDATION

SIGN SCHEDULE					
SIGN NO.	MUTCD	SIGN TYPE	STA/OFF	SIZE	NOTES
207	R1-1	STOP STREET NAME SIGN (X2)	222+43.43, 31.26	30X30 8X24	"CORAL LN SW" & "ONYX DR SW"
208	W1-7	RIGHT-LEFT TURN	222+65.13, 24.00	36X18	
216	S1-1 W16-7P	SCHOOL CROSSING / DOWNWARD ARROW	215+05.13, 19.75	30X30 24X12	
217	S1-1 W16-7P	SCHOOL CROSSING / DOWNWARD ARROW	214+89.57, 26.80	30X30 24X12	
220	W11-2 W16-7P	PEDESTRIAN CROSSING / DOWNWARD ARROW	223+18.96, 21.00	30X30 24X12	
221	W11-2 W16-7P	PEDESTERIAN CROSSING / DOWNWARD ARROW	223+09.29, 15.00	30X30 24X12	

NOTES:
1. INSTALL SIGNS ON STEEL POST STREET SIGN SUPPORT PER LAKEWOOD STANDARD PLAN PS-03.
2. PROVIDE STREET NAME SIGNS PER LAKEWOOD STANDARD PLAN PS-01.

SCALE: 1"=20'

Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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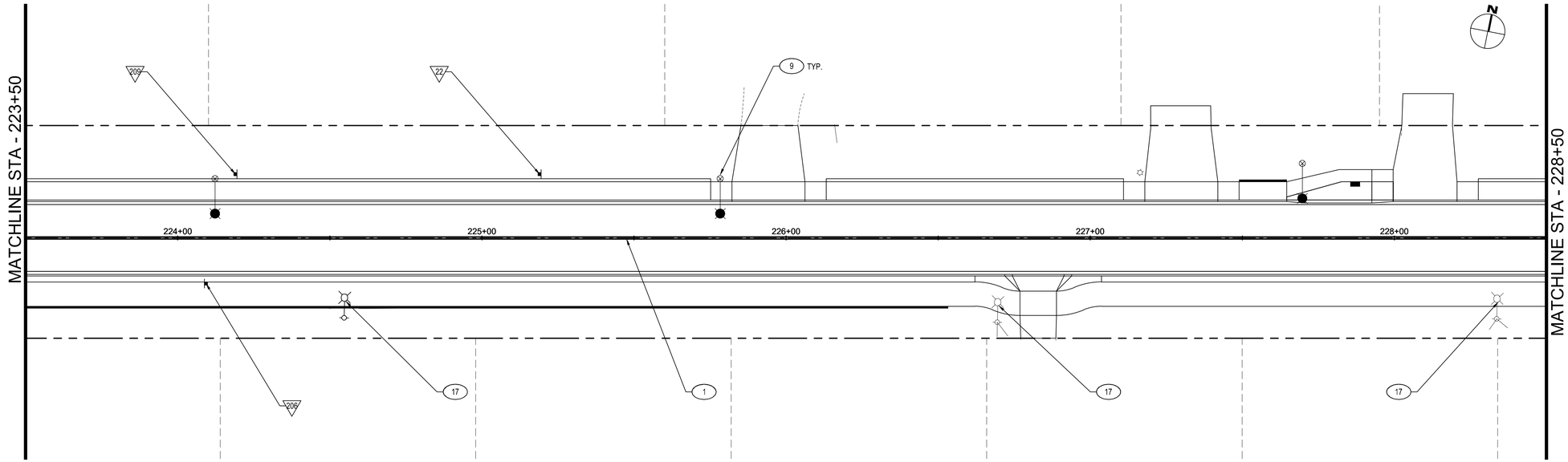
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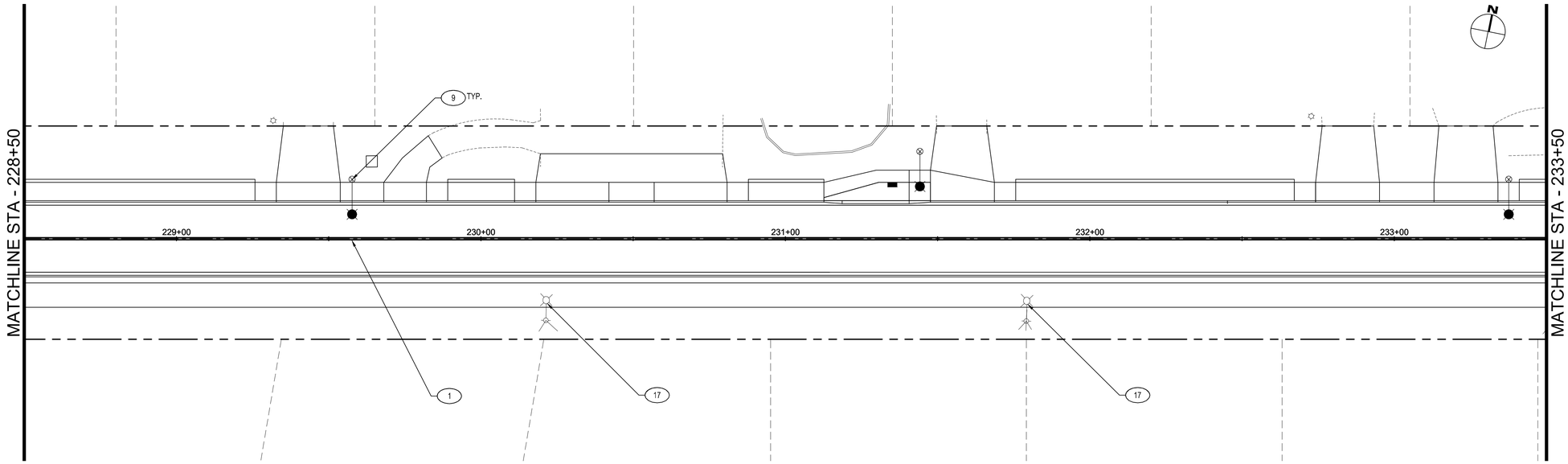
SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: PAVEMENT MARKING AND SITE PLAN - STA 214+00 TO 223+50

PROJECT: 302.0138
DRAWING: PM5
SHEET: 42 of 64

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PAVEMENT MARKING NOTES:

1. YELLOW PROFILED PLASTIC DOUBLE CENTERLINE WITH TYPE 2YY RPMS PER WSDOT STANDARD PLANS M-20.10-02, M-20.20-02, AND M-20.30-04.
9. ILLUMINATION POLE. SEE ILLUMINATION PLANS.
17. REMOVE EXISTING LUMINARY FROM UTILITY POLE BY OTHERS. EXISTING UTILITY POLE AND GUY ANCHOR TO REMAIN.

SIGN SCHEDULE					
SIGN NO.	MUTCD	SIGN TYPE	STA/OFF	SIZE	NOTES
22	W13-1	SPEED TABLE AHEAD/ADVISED SPEED (20MPH)	225+18.96, 21.00	30X30 18X18	
206	W11-3	DEER CROSSING	224+09.29, 15.00	24X24	
209	W1-1R	TURN AHEAD (L)	224+18.96, 21.00	24X24	

NOTES:
1. INSTALL SIGNS ON STEEL POST STREET SIGN SUPPORT PER LAKEWOOD STANDARD PLAN PS-03.
2. PROVIDE STREET NAME SIGNS PER LAKEWOOD STANDARD PLAN PS-01.

20 10 0 20
SCALE: 1"=20'

Know what's **below.** **Call** before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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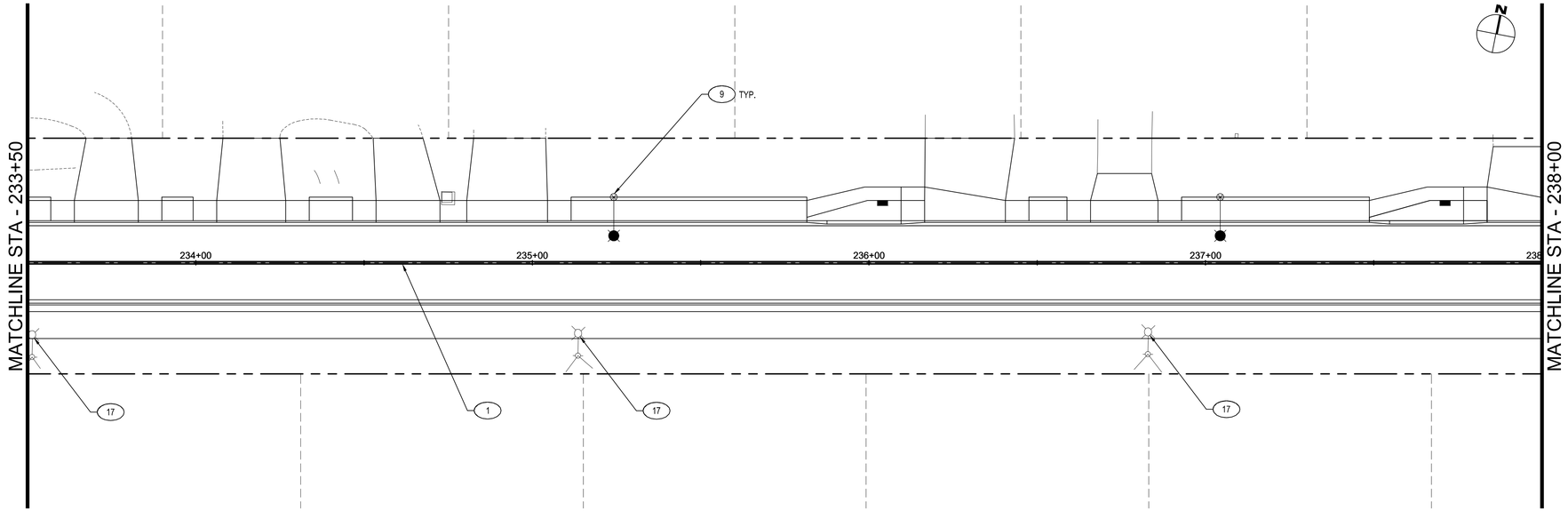
CITY OF LAKEWOOD, WA 1996

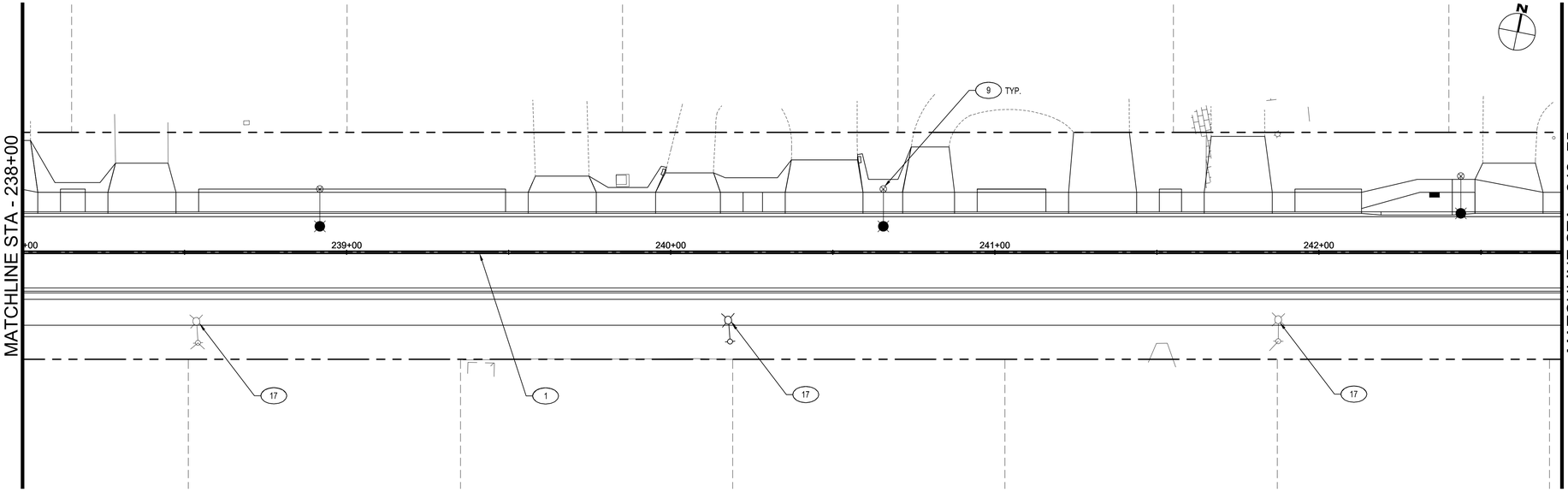
SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: PAVEMENT MARKING AND SITE PLAN - STA 223+50 TO 233+50

PROJECT: 302.0138
DRAWING: PM6
SHEET: 43 of 64

P:\19000\19046.00.00 - Onyx Dr Improvements\Civil\07-CAD\BCRA\Production Dwgs\19046C CHAN-E.dwg 2/12/20





PAVEMENT MARKING NOTES:

1. YELLOW PROFILED PLASTIC DOUBLE CENTERLINE WITH TYPE 2YY RPMS PER WSDOT STANDARD PLANS M-20.10-02, M-20.20-02, AND M-20.30-04.
9. ILLUMINATION POLE. SEE ILLUMINATION PLANS.
17. REMOVE EXISTING LUMINARY FROM UTILITY POLE BY OTHERS. EXISTING UTILITY POLE AND GUY ANCHOR TO REMAIN.

20 10 0 20
SCALE: 1"=20'

811 Know what's **below.** **Call** before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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T 253.627.4367 F 253.627.4395 WWW.BCRADESIGN.COM
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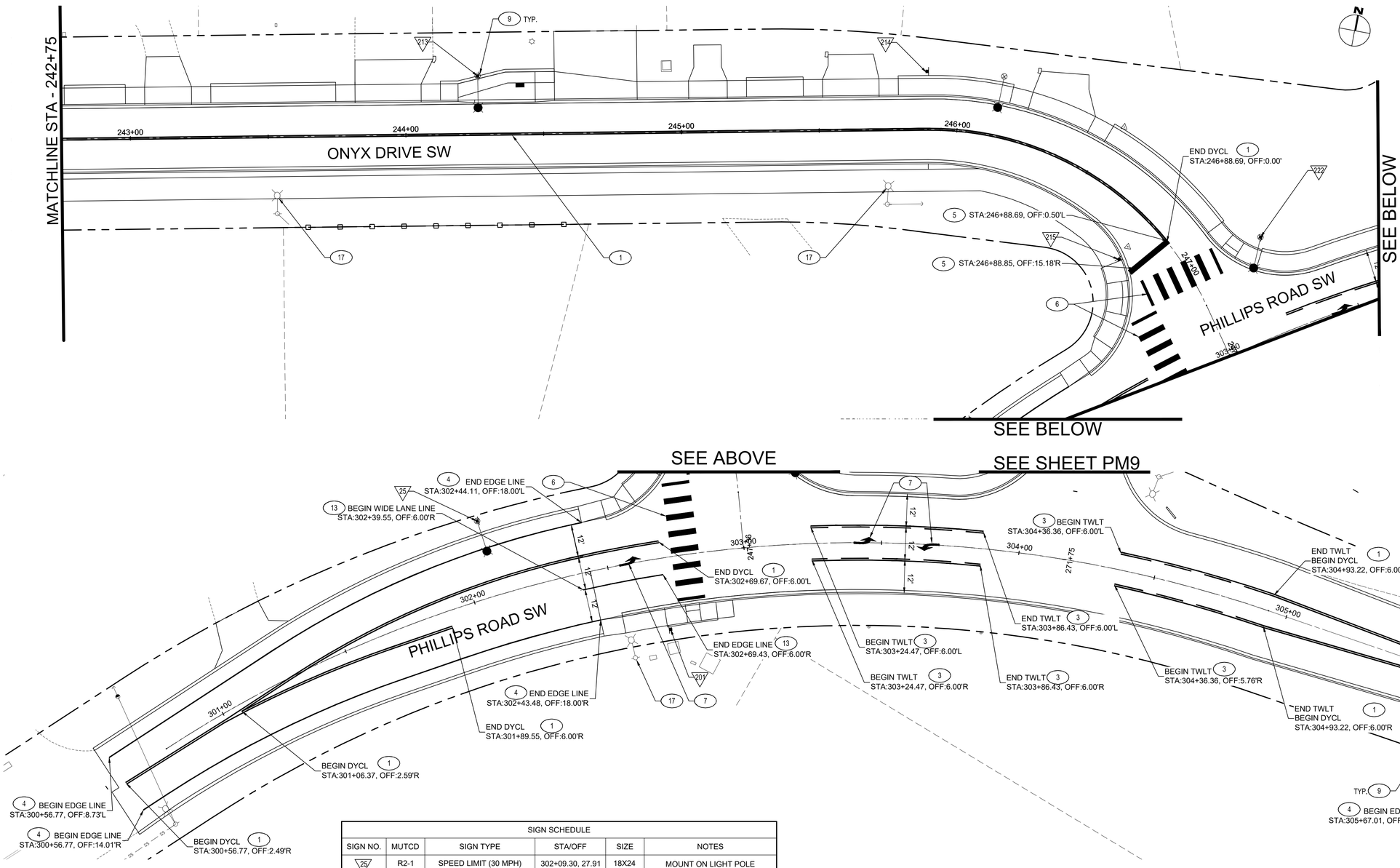
CITY OF LAKEWOOD, WA 1996

SHANNON MARIE PODGORSKI otherwise STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: PAVEMENT MARKING AND SITE PLAN - STA 233+50 TO 242+75

PROJECT: 302.0138
DRAWING: PM7
SHEET: 44 of 64

P:\19000\19046.00.00 - Onyx Dr Improvements\Civil\07-CAD\BCRA\Production Dwgs\19046C CHAN-E.dwg 2/12/20



PAVEMENT MARKING NOTES:

1. YELLOW PROFILED PLASTIC DOUBLE CENTERLINE WITH TYPE 2YY RPMS PER WSDOT STANDARD PLANS M-20.10-02, M-20.20-02, AND M-20.30-04.
3. YELLOW PROFILED PLASTIC TWO-WAY LEFT-TURN CENTERLINE WITH TYPE 2YY RPMS PER WSDOT STANDARD PLAN M-20.10-02 AND M-20.40-03.
4. WHITE PROFILED PLASTIC EDGE LINE PER WSDOT STANDARD PLAN M-20.10-02 AND M-20.20-02.
5. 2' WIDE PLASTIC STOP BAR PER WSDOT STANDARD PLAN M-15.10-01 AND LAKEWOOD STANDARD PLAN PS-05.
6. CROSSWALK PER WSDOT STANDARD PLAN M-15.10-01 AND LAKEWOOD STANDARD PLAN PS-05.
7. PLASTIC TYPE 2SL LEFT TURN TRAFFIC ARROW PER WSDOT STANDARD PLAN M-24.40-02.
9. ILLUMINATION POLE. SEE ILLUMINATION PLANS.
13. WHITE PROFILED PLASTIC WIDE LANE LINE WITH TYPE 2W RPMS PER WSDOT STANDARD PLANS M-20.10-02, M-20.20-02, AND M-20.40-03.
15. RELOCATED "OAKHOUSE RESTAURANT & BAR" SIGN. LOCATION TO BE DETERMINED IN FIELD.
17. REMOVE EXISTING LUMINARY FROM UTILITY POLE BY OTHERS. EXISTING UTILITY POLE AND GUY ANCHOR TO REMAIN.

SIGN SCHEDULE					
SIGN NO.	MUTCD	SIGN TYPE	STA/OFF	SIZE	NOTES
25	R2-1	SPEED LIMIT (30 MPH)	302+09.30, 27.91	18X24	MOUNT ON LIGHT POLE
207	W11-2 W16-7P	PEDESTERIAN CROSSING / DOWNWARD ARROW	302+69.01, 26.00	30X30 24X12	
213	N/A	ADOPT A STREET	244+26.21, 21.17	EX.	MOUNT SALVAGED SIGN ON LIGHT POLE
214	R2-1	SPEED LIMIT (30 MPH)	245+89.43, 21.00	18X24	
215	R1-1	STOP STREET NAME SIGN (X2)	246+81.55, 17.35	30X30 8X24	"PHILLIPS RD SW" & "ONYX DR SW"
222	W11-2 W16-7P	PEDESTERIAN CROSSING / DOWNWARD ARROW	247+04.59, 28.95	30X30 24X12	MOUNT ON LIGHT POLE

NOTES:
1. INSTALL SIGNS ON STEEL POST STREET SIGN SUPPORT PER LAKEWOOD STANDARD PLAN PS-03.
2. PROVIDE STREET NAME SIGNS PER LAKEWOOD STANDARD PLAN PS-01.

SCALE: 1"=20'

Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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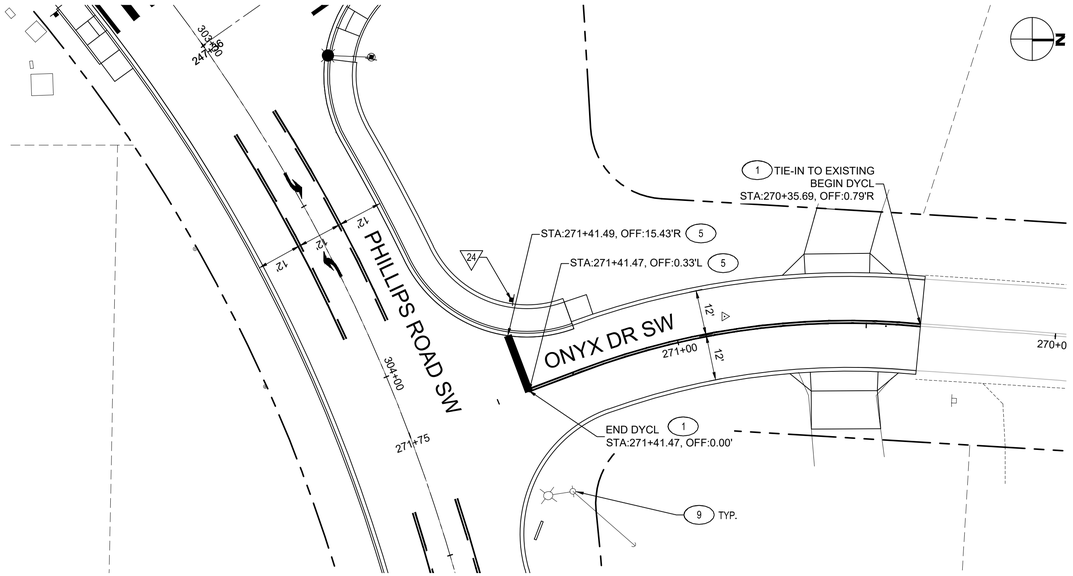
CITY OF LAKEWOOD, WA 1996

SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: PAVEMENT MARKING AND SITE PLAN - STA 242+75 TO 247+36

PROJECT 302.0138
DRAWING PM8
SHEET 45 of 64

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PAVEMENT MARKING NOTES:

1. YELLOW PROFILED PLASTIC DOUBLE CENTERLINE WITH TYPE 2YY RPMS PER WSDOT STANDARD PLANS M-20.10-02, M-20.20-02, AND M-20.30-04.
5. 2' WIDE PLASTIC STOP BAR PER WSDOT STANDARD PLAN M-15.10-0 AND LAKEWOOD STANDARD PLAN PS-05.
9. ILLUMINATION POLE. SEE ILLUMINATION PLANS.

SIGN SCHEDULE					
SIGN NO.	MUTCD	SIGN TYPE	STA/OFF	SIZE	NOTES
24	R1-1	STOP STREET NAME SIGN (X2)	303+94.45, 38.29	30X30 8X24	"PHILLIPS RD SW" & "ONYX DR SW"

NOTES:
1. INSTALL SIGNS ON STEEL POST STREET SIGN SUPPORT PER LAKEWOOD STANDARD PLAN PS-03.
2. PROVIDE STREET NAME SIGNS PER LAKEWOOD STANDARD PLAN PS-01.

20 10 0 20
SCALE: 1"=20'

Know what's **below.** **Call** before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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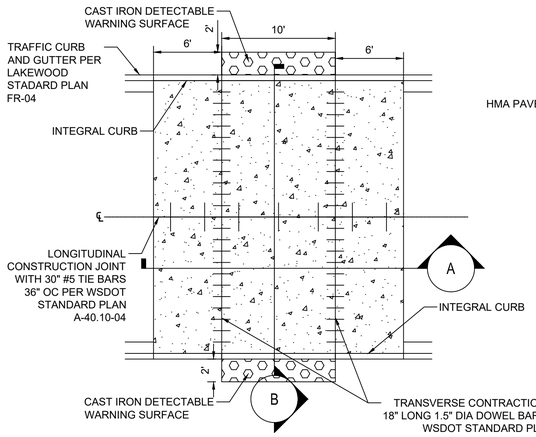
CITY OF LAKEWOOD, WA 1996

SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: PAVEMENT MARKING AND SITE PLAN FOR ONYX STUB

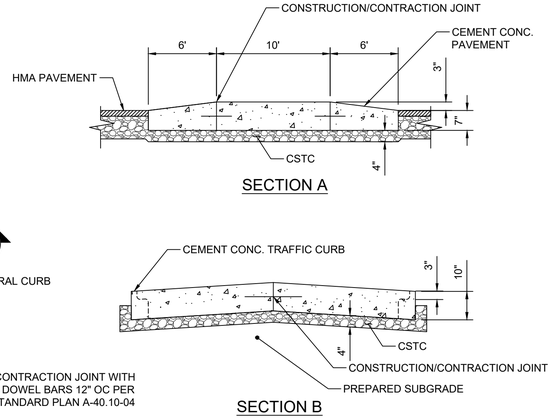
PROJECT: 302.0138
DRAWING: PM9
SHEET: 46 of 64

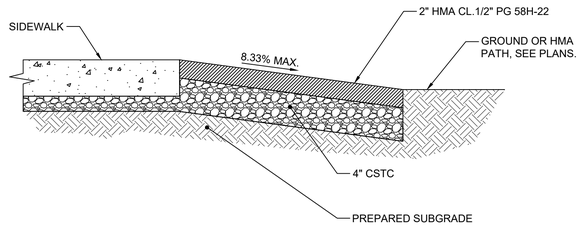
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RAISED CROSSWALK

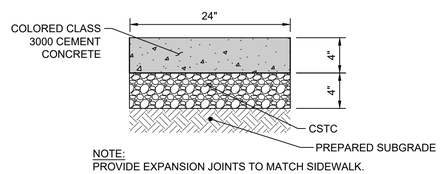
SCALE: NTS 1





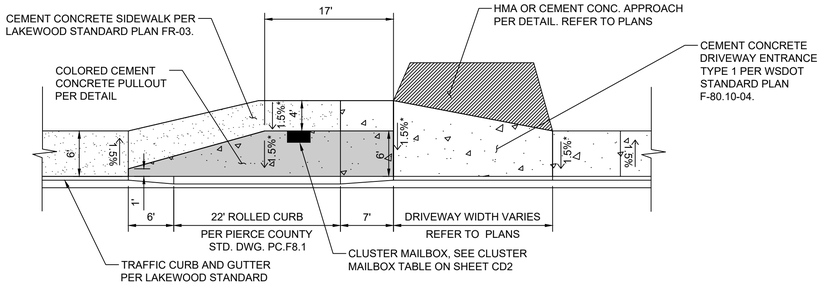
HMA RAMP

SCALE: NTS 2



COLORED CEMENT CONCRETE SIDEWALK

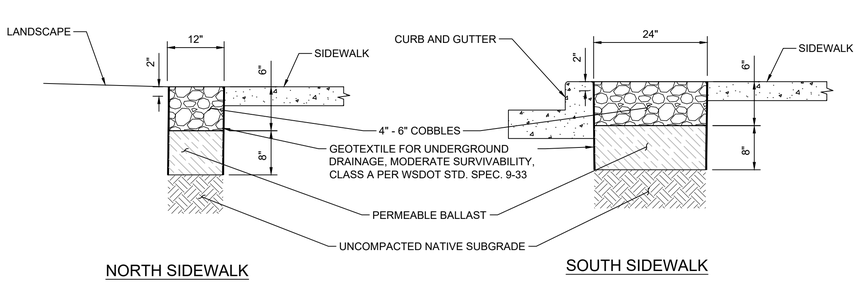
SCALE: NTS 3



DRIVEWAY CLUSTER MAILBOX

*UNLESS OTHERWISE NOTED ON PLANS

SCALE: NTS 4

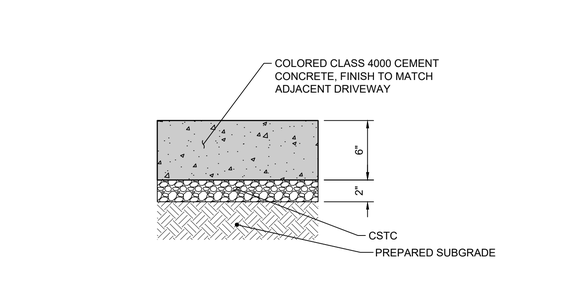


NORTH SIDEWALK

SOUTH SIDEWALK

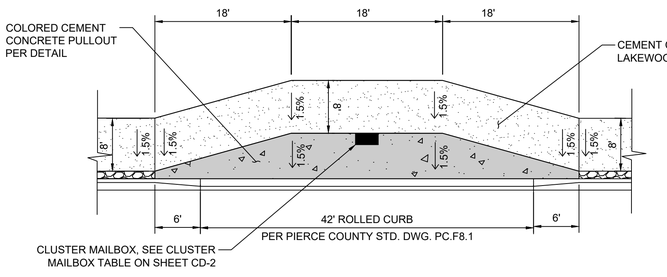
STORMWATER INTERCEPTOR TRENCH

SCALE: NTS 5



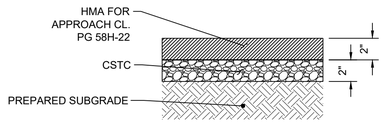
COLORED CEMENT CONCRETE PULLOUT

SCALE: NTS 6



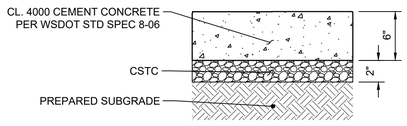
CLUSTER MAILBOX PULLOUT

SCALE: NTS 7



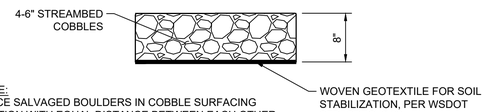
HMA APPROACH

SCALE: NTS 8



CEMENT CONCRETE APPROACH

SCALE: NTS 9



COBBLE SURFACING

SCALE: NTS 10

Know what's **below.** **Call** before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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CITY OF LAKEWOOD, WA 1996

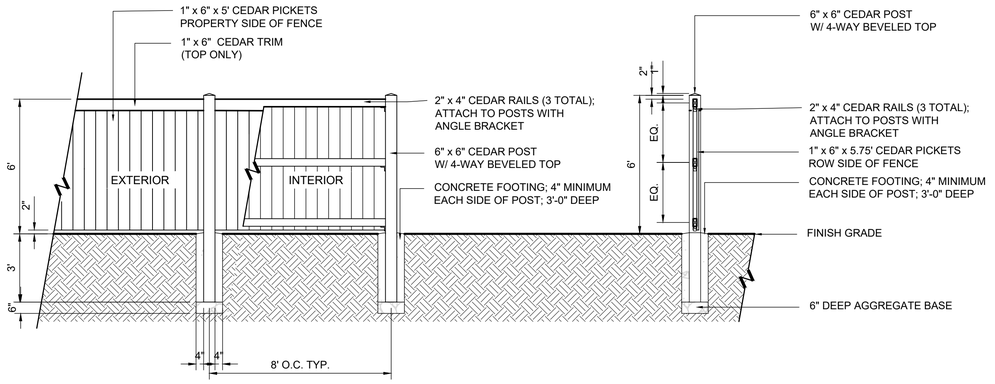
SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER Official

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS

DRAWING NAME: CIVIL DETAILS

PROJECT: 302.0138
DRAWING: CD1
SHEET: 47 of 64

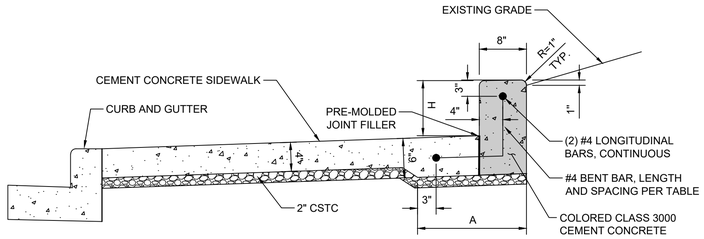
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WOOD FENCE

SCALE: NTS

1



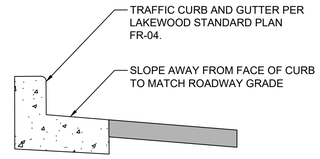
NOTE:
PROVIDE EXPANSION JOINTS 45' OC. ALIGN EXPANSION JOINTS WITH SIDEWALK EXPANSION JOINT.

H	A	SPACING O.C.
6"-17"	18"	30"
18"-23"	18"	24"
24"-30"	24"	18"

CAST-IN-PLACE CONCRETE WALL

SCALE: NTS

2



SPILL GUTTER

SCALE: NTS

3

CLUSTER MAILBOX STATION	CLUSTER MAILBOX UNIT COUNT	APN	ADDRESSES
102+25.62	4	6430450600	9601 ONYX DR SW
		6430450610	9607 ONYX DR SW
		6430450620	9621 ONYX DR SW
104+47.60	4	6430450590	9517 ONYX DR SW
		6430450020	9430 ONYX DR SW
107+71.20	4	6430450300	9423 ONYX DR SW
		6430450010	9424 ONYX DR SW
120+57.72	4	4000020270	9112 ONYX DR SW
		4000020260	9116 ONYX DR SW
217+35.25	8	6430400310	8306 ONYX DR SW
		6430400180	8309 ONYX DR SW
		6430400320	8312 ONYX DR SW
		6430400170	8313 ONYX DR SW
		6430400160	8317 ONYX DR SW
		9002090020	8319 ONYX DR SW
		9002090010	8321 ONYX DR SW
219+88.07	4	6430400220	8201 ONYX DR SW
		6430400212	8209 ONYX DR SW
		6430400200	8301 ONYX DR SW
		6430400190	8305 ONYX DR SW
227+87.12	4	6430403430	8005 ONYX DR SW
		6430403420	8009 ONYX DR SW
		6430403410	8013 ONYX DR SW
231+35.14	4	6430403470	7901 ONYX DR SW
		6430403460	7905 ONYX DR SW
		6430403450	7909 ONYX DR SW
		6430403440	8001 ONYX DR SW
236+04.03	4	6430403510	7709 ONYX DR SW
		6430403500	7801 ONYX DR SW
		6430403490	7805 ONYX DR SW
		6430403480	7809 ONYX DR SW
237+71.20	4	6430403550	7609 ONYX DR SW
		6430403540	7613 ONYX DR SW
		6430403530	7701 ONYX DR SW
		6430403520	7705 ONYX DR SW
242+35.66	4	6430403590	7517 ONYX DR SW
		6430403580	7521 ONYX DR SW
		6430403570	7601 ONYX DR SW
		6430403560	7605 ONYX DR SW
244+41.59	4	6430403630	7501 ONYX DR SW
		6430403620	7505 ONYX DR SW
		6430403610	7509 ONYX DR SW
		6430403600	7513 ONYX DR SW

CLUSTER MAILBOX TABLE

SCALE: NTS

4

Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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CITY OF LAKEWOOD, WA 1996

SHANNON MARIE PODGORSKI STATE OF WASHINGTON 58052 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: CIVIL DETAILS

PROJECT: 302.0138
DRAWING: CD2
SHEET: 48 of 64

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BUFFER DATA									
LONGITUDINAL BUFFER SPACE = B									
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730

TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R

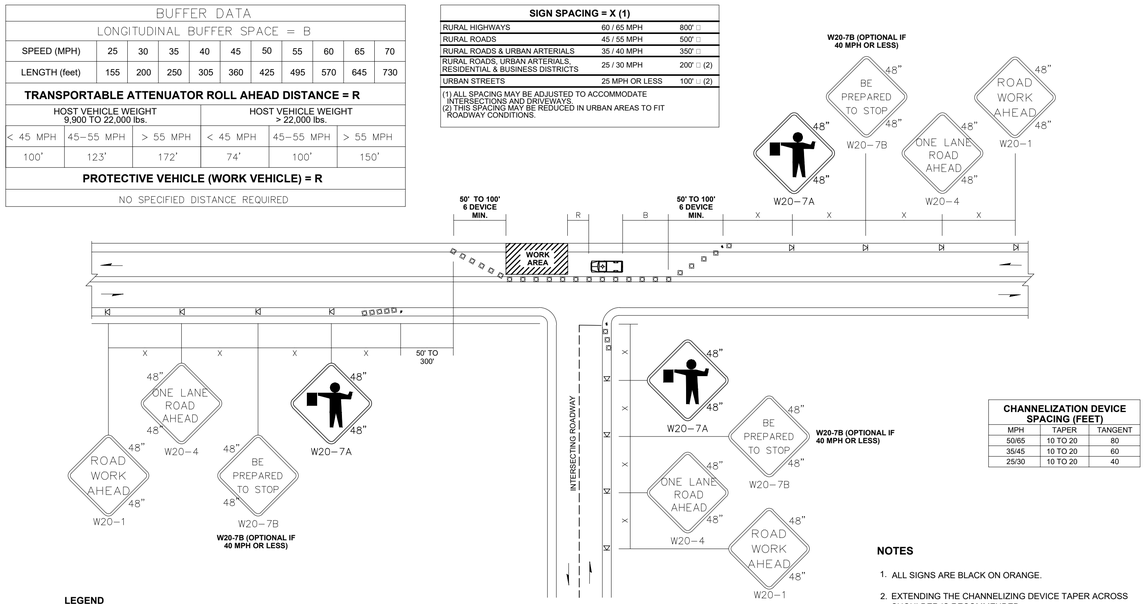
HOST VEHICLE WEIGHT 9,900 TO 22,000 lbs.			HOST VEHICLE WEIGHT > 22,000 lbs.		
< 45 MPH	45–55 MPH	> 55 MPH	< 45 MPH	45–55 MPH	> 55 MPH
100'	123'	172'	74'	100'	150'

PROTECTIVE VEHICLE (WORK VEHICLE) = R

NO SPECIFIED DISTANCE REQUIRED

SIGN SPACING = X (1)		
RURAL HIGHWAYS	60 / 65 MPH	800' □
RURAL ROADS	45 / 55 MPH	500' □
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' □
RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' □ (2)
URBAN STREETS	25 MPH OR LESS	100' □ (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.



CHANNELIZATION DEVICE SPACING (FEET)		
MPH	TAPER	TANGENT
50/65	10 TO 20	80
35/45	10 TO 20	60
25/30	10 TO 20	40

LEGEND

- FLAGGING STATION
- TEMPORARY SIGN LOCATION
- CHANNELIZING DEVICES
- PROTECTIVE VEHICLE

NOTES

1. ALL SIGNS ARE BLACK ON ORANGE.
2. EXTENDING THE CHANNELIZING DEVICE TAPER ACROSS SHOULDER IS RECOMMENDED.
3. NIGHT WORK REQUIRES ADDITIONAL ROADWAY LIGHTING AT FLAGGING STATIONS. SEE THE **STANDARD SPECIFICATIONS** FOR ADDITIONAL DETAILS.
4. SEE **SPECIAL PROVISIONS** FOR WORK HOUR RESTRICTIONS.

ONE-LANE, TWO-WAY TRAFFIC CONTROL WITH FLAGGERS

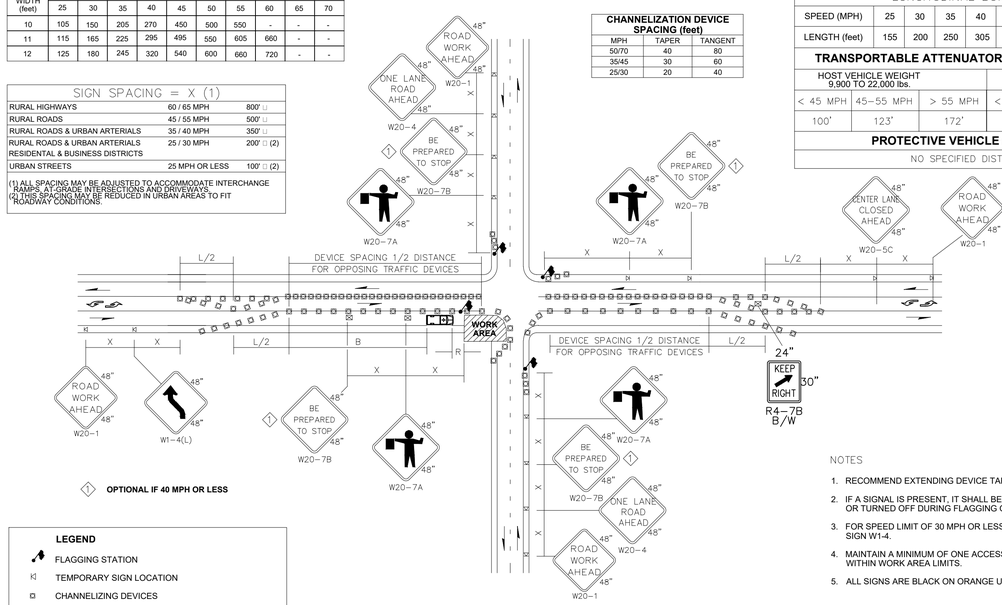
NOT TO SCALE

MINIMUM TAPER LENGTH = L (feet)										
LANE WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
10	105	150	205	270	450	500	550	-	-	-
11	115	165	225	295	495	550	605	660	-	-
12	125	180	245	320	540	600	660	720	-	-

SIGN SPACING = X (1)		
RURAL HIGHWAYS	60 / 65 MPH	800' □
RURAL ROADS	45 / 55 MPH	500' □
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' □
RURAL ROADS & URBAN ARTERIALS RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' □ (2)
URBAN STREETS	25 MPH OR LESS	100' □ (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50/70	40	80
35/45	30	60
25/30	20	40



LEGEND

- FLAGGING STATION
- TEMPORARY SIGN LOCATION
- CHANNELIZING DEVICES
- PROTECTIVE VEHICLE - RECOMMENDED
- TEMPORARY SIGN LOCATION (5' MOUNTING HEIGHT)

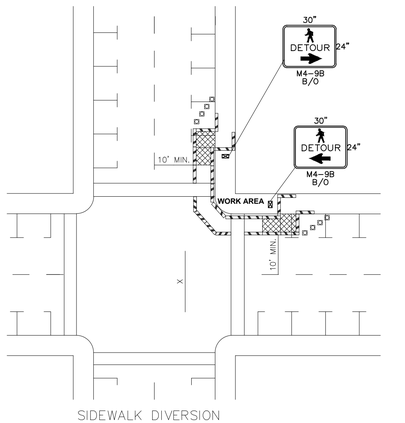
NOTES

1. RECOMMEND EXTENDING DEVICE TAPER (L/3) ACROSS SHOULDER.
2. IF A SIGNAL IS PRESENT, IT SHALL BE SET TO "RED FLASH MODE" OR TURNED OFF DURING FLAGGING OPERATIONS.
3. FOR SPEED LIMIT OF 30 MPH OR LESS USE SIGN W1-3 IN LIEU OF SIGN W1-4.
4. MAINTAIN A MINIMUM OF ONE ACCESS POINT FOR EACH BUSINESS WITHIN WORK AREA LIMITS.
5. ALL SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE DESIGNATED.

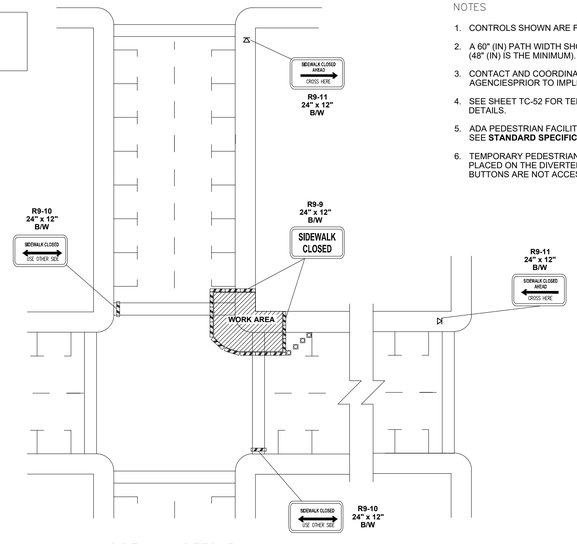
INTERSECTION LANE CLOSURE - THREE LANE ROADWAY

NOT TO SCALE

NO PARKING R8-3 24" x 30" R/W — INSTALL ON TYPE 3 BARRICADES THROUGHOUT THE WORK AREA 24 HOURS PRIOR TO IMPLEMENTING TRAFFIC CONTROL. PRIOR NOTIFICATION OF LOCAL LAW ENFORCEMENT REQUIRED.



SIDEWALK DIVERSION



SIDEWALK DETOUR

LEGEND

- TEMPORARY SIGN LOCATION
- CHANNELIZING DEVICES
- PEDESTRIAN CHANNELIZING DEVICES
- TEMPORARY PEDESTRIAN RAMP FOR SIDEWALKS

NOTES

1. CONTROLS SHOWN ARE FOR PEDESTRIAN TRAFFIC ONLY.
2. A 60" (IN) PATH WIDTH SHOULD BE MAINTAINED (48" (IN) IS THE MINIMUM).
3. CONTACT AND COORDINATE IMPACTED TRANSIT AGENCIESPRIOR TO IMPLEMENTING ANY CLOSURES.
4. SEE SHEET TC-52 FOR TEMPORARY PEDESTRIAN RAMP DETAILS.
5. ADA PEDESTRIAN FACILITIES MUST BE MAINTAINED. SEE **STANDARD SPECIFICATION 1-10.2(1)B.**
6. TEMPORARY PEDESTRIAN PUSH BUTTONS SHALL BE PLACED ON THE DIVERTED PATH WHEN EXISTING BUTTONS ARE NOT ACCESSIBLE TO PEDESTRIANS.

INTERSECTION PEDESTRIAN TRAFFIC CONTROL

NOT TO SCALE

SIGN SPACING = X (1)		
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' □
RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' □ (2)
URBAN STREETS	25 MPH OR LESS	100' □ (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

LEGEND

- TEMPORARY SIGN LOCATION
- CHANNELIZING DEVICES
- PROTECTIVE VEHICLE

MINIMUM SHOULDER TAPER LENGTH = L/3 (feet)										
SHOULDER WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
8'	40	40	60	90	-	-	-	-	-	-
10'	40	60	90	90	-	-	-	-	-	-

USE A 3 DEVICES TAPER FOR SHOULDERS LESS THEN 8'

BUFFER DATA									
LONGITUDINAL BUFFER SPACE = B									
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730

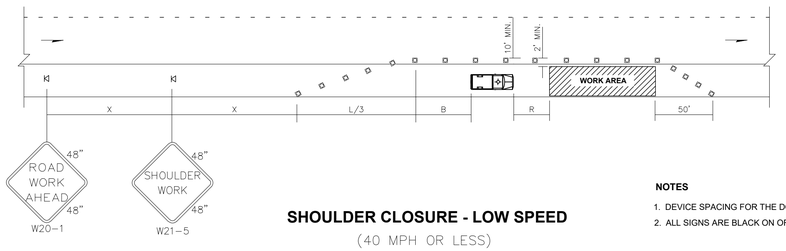
TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R

HOST VEHICLE WEIGHT 9,900 TO 22,000 lbs.			HOST VEHICLE WEIGHT > 22,000 lbs.		
< 45 MPH	45–55 MPH	> 55 MPH	< 45 MPH	45–55 MPH	> 55 MPH
100'	123'	172'	74'	100'	150'

PROTECTIVE VEHICLE (WORK VEHICLE) = R

NO SPECIFIED DISTANCE REQUIRED

CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
35/40	30	
25/30	20	



SHOULDER CLOSURE - LOW SPEED

(40 MPH OR LESS)

NOTES

1. DEVICE SPACING FOR THE DOWNSTREAM TAPER SHALL BE 20' (FT).
2. ALL SIGNS ARE BLACK ON ORANGE.

Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

bcra
T 253.627.4367 F 253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

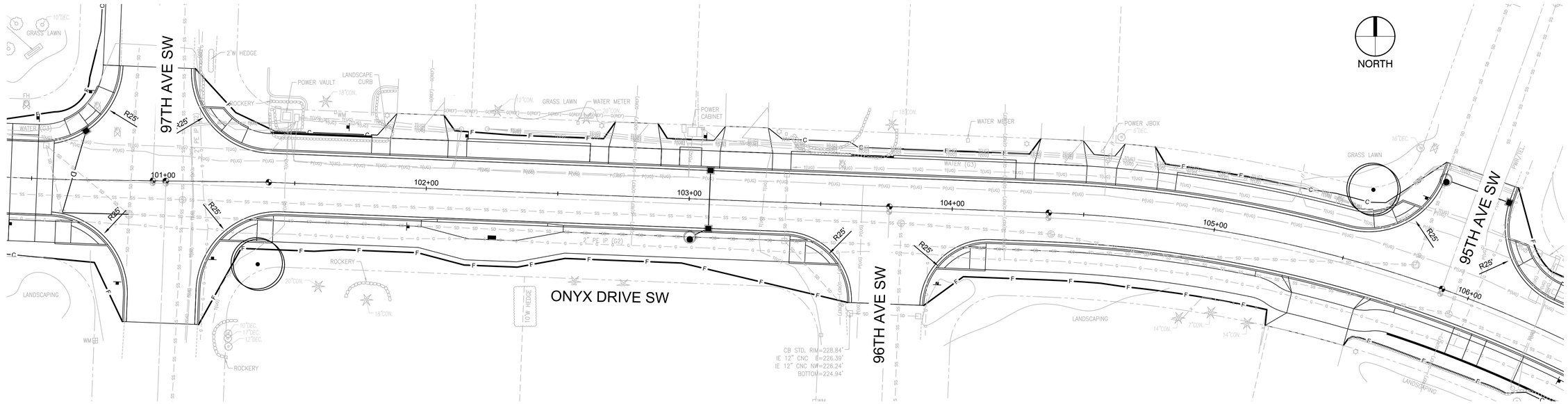
CITY OF LAKEWOOD, WA 1996

SHANNON MARIE PODGORSKI — STATE OF WASHINGTON — 58052 REGISTERED PROFESSIONAL ENGINEER — October

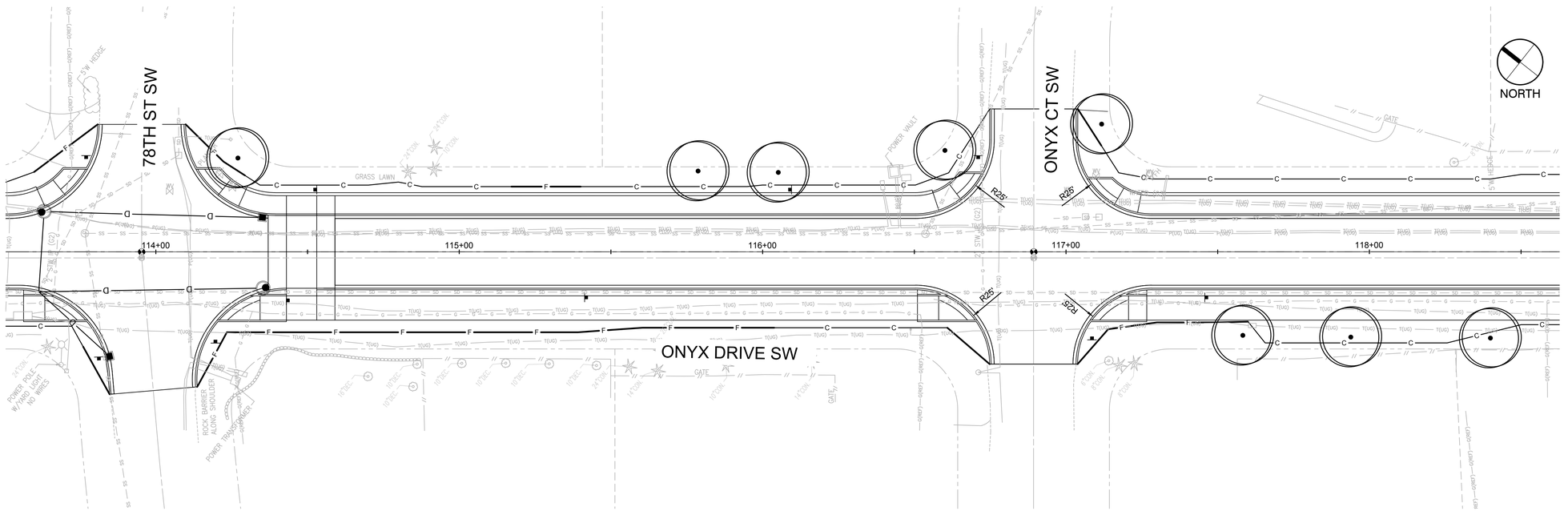
PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: TRAFFIC CONTROL PLAN

PROJECT 302.0138
DRAWING TCP
SHEET 49 of 64

P:\19000\19046.00.00 - Onyx Dr Improvements\Civil\07-CAD\BCRA\Production Dwgs\19046C-DETL.dwg 2/12/20



1 LA1 97TH AVENUE SW - 95TH AVE SW & ONXY DRIVE SW



4 LA1 TREE REPLACEMENT AT 78TH AVENUE SW - ONYX CT SW & ONXY DRIVE SW

NORTH

20 10 0 20

SCALE: 1"=20'

STATE OF WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT

JON MCNAMARA

LICENSE NO. 903
EXPIRES ON 06/29/2020

811 Know what's **below.** **Call** before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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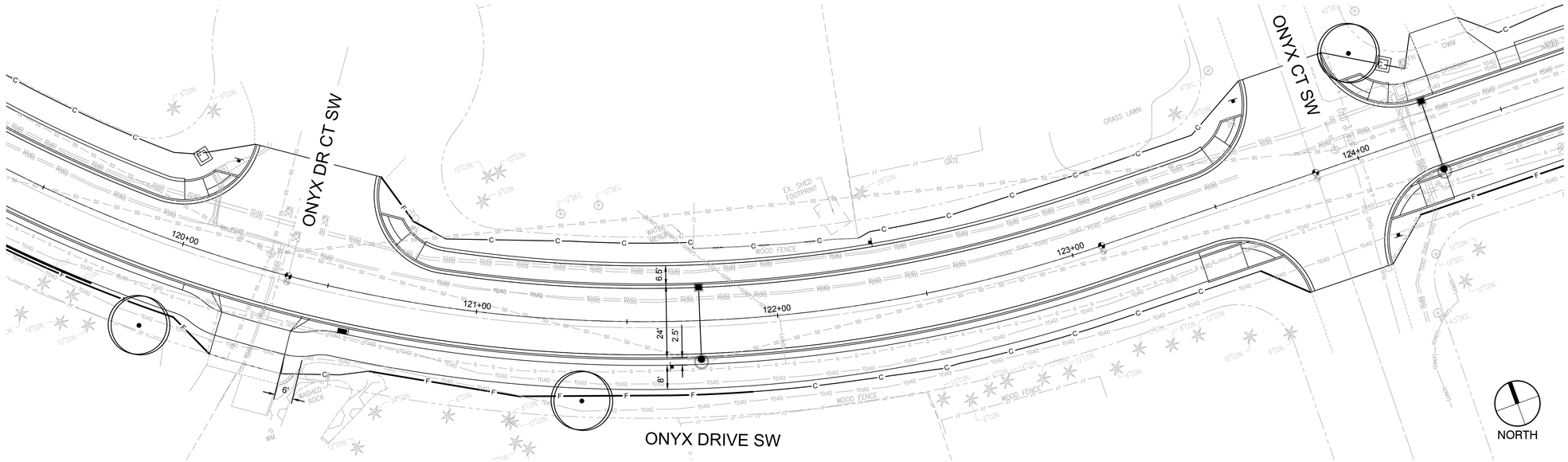
CITY OF LAKEWOOD, WA 1996

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS

DRAWING NAME: LANDSCAPING WEST PLAN VIEW

PROJECT: 302.0138
DRAWING: LA1
SHEET: 50 of 64

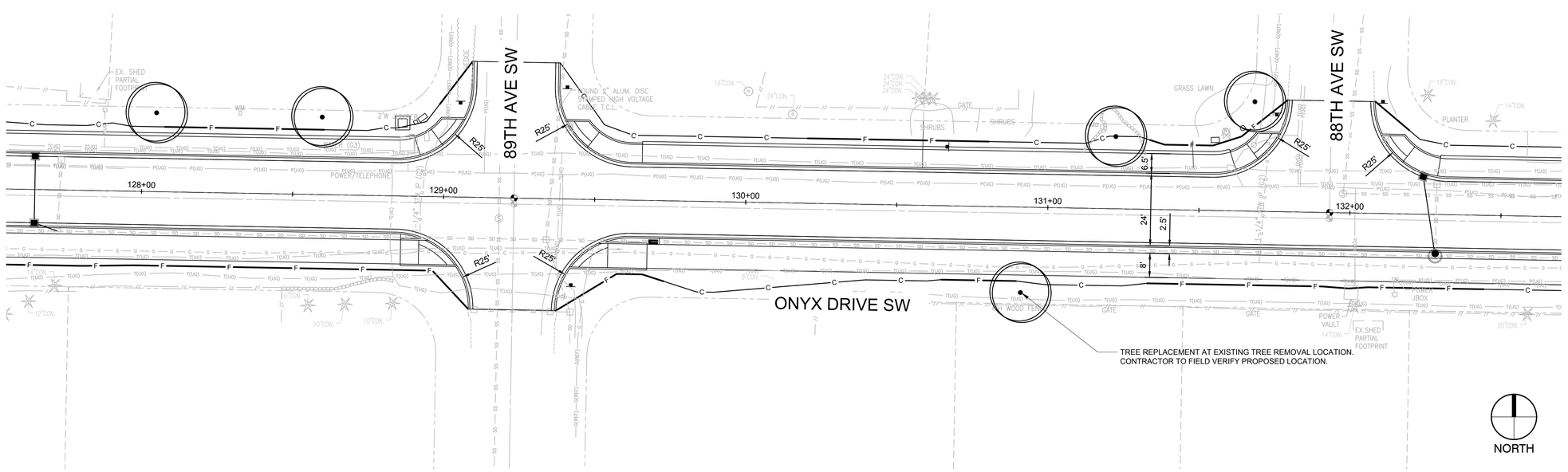
P:\19000\19046.00.00 - Onyx Dr Improvements\Civil\07-CAD\BCRA\Production Dwgs\19046C LA-PLPL.dwg 2/11/20



4 LA1 TREE REPLACEMENT AT ONYX DR CT SW - ONYX CT SW & ONXY DRIVE SW

0 20 40 60 feet

SCALE: 1" = 20'



4 LA1 TREE REPLACEMENT AT 89TH AVENUE SW - 88TH AVENUE SW & ONXY DRIVE SW

0 20 40 60 feet

SCALE: 1" = 20'

20 10 0 20

SCALE: 1"=20'

STATE OF WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT
JON P. McNAMARA
LICENSE NO. 903
EXPIRES ON 06/29/2020

811 know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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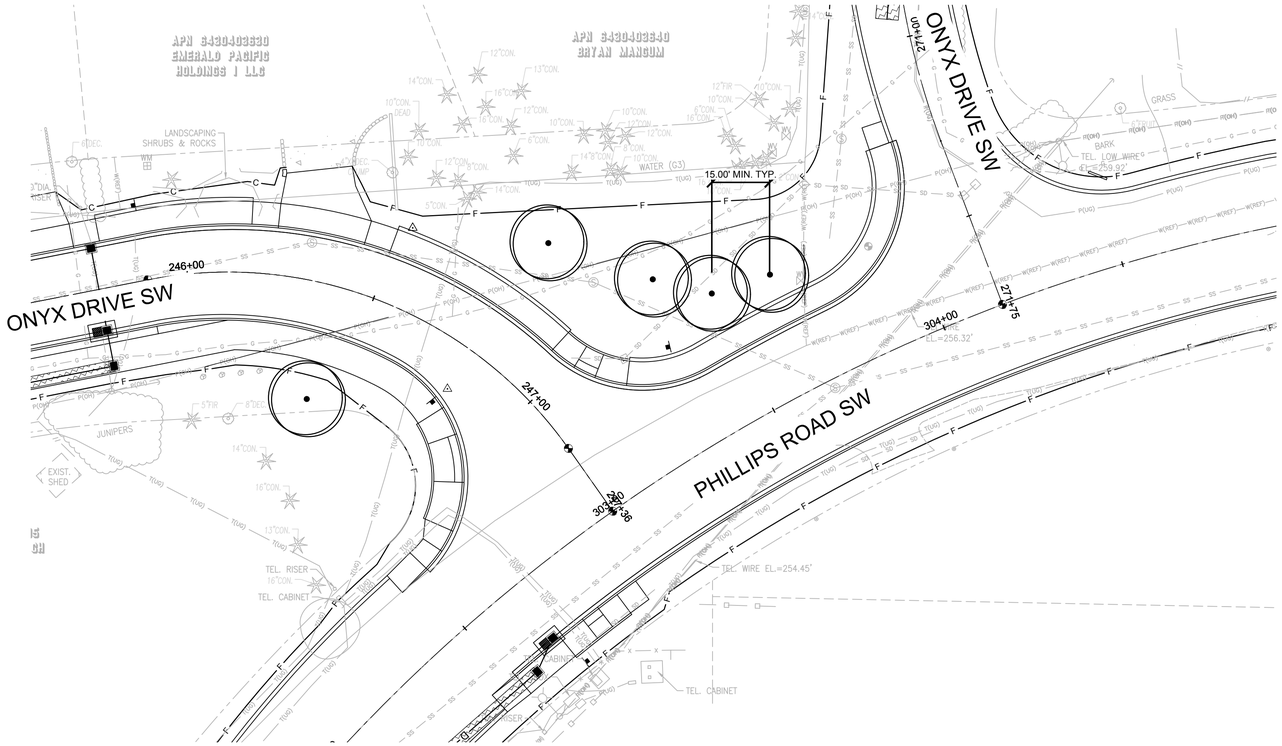
CITY OF LAKEWOOD, WA 1996

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS

DRAWING NAME: LANDSCAPING WEST PLAN VIEW

PROJECT: 302.0138
DRAWING: LA2
SHEET: 51 of 64

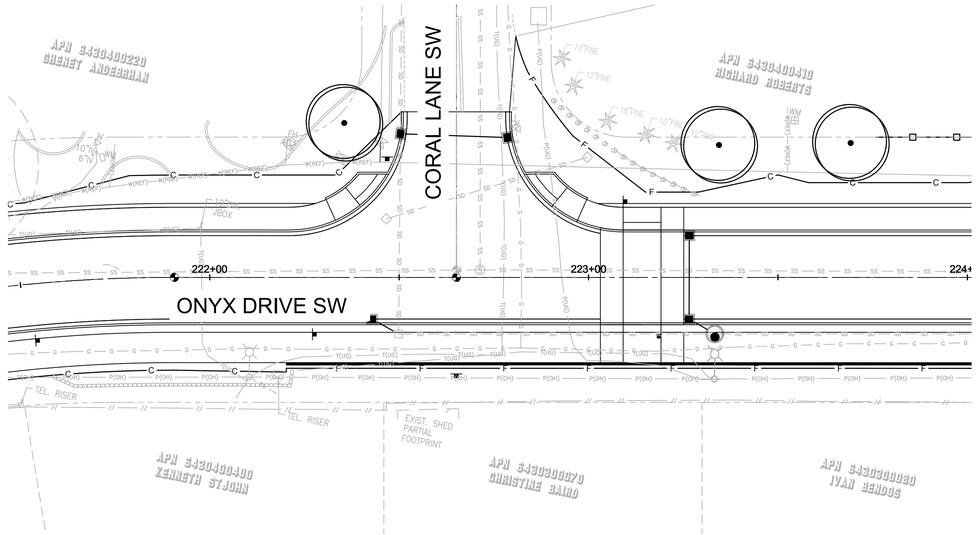
P:\19000\19046.00.00 - Onyx Dr Improvements\Civil\07-CAD\BCRA\Production Dwgs\19046C LA-PLPL.dwg 2/11/20



1 LA2 TREE REPLACEMENT AT PHILIPS ROAD SW

0 20 40 60 feet

SCALE: 1" = 20'

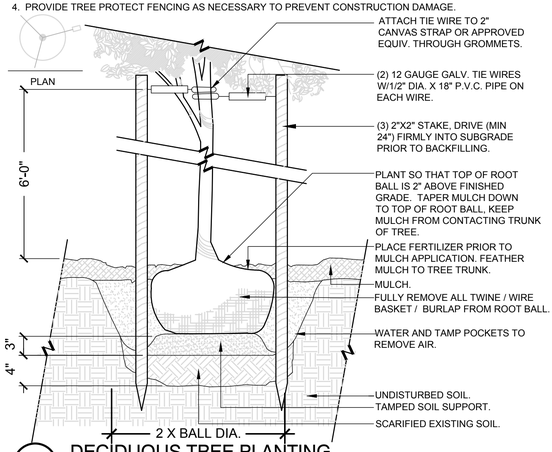


2 LA2 TREE REPLACEMENT AT CORAL LANE SW & ONXY DRIVE SW

0 20 40 60 feet

SCALE: 1" = 20'

NOTE:
1. DO NOT CUT LEADER. PRUNE ALL DAMAGED OR DEAD WOOD AFTER PLANTING, STAKING AND MULCHING.
2. KEEP CROWN SHAPE TYPICAL OF SPECIES.
3. REMOVE ALL PLANTING LABELS AFTER FINAL ACCEPTANCE BY LANDSCAPE ARCHITECT.
4. PROVIDE TREE PROTECT FENCING AS NECESSARY TO PREVENT CONSTRUCTION DAMAGE.



1 DECIDUOUS TREE PLANTING

1" = 1'-0" 329343.43-28

TREE SCHEDULE

TREES	BOTANICAL / COMMON NAME	CONT	CAL	QTY	DETAIL
	AMELANCHIER X GRANDIFLORA `AUTUMN BRILLIANCE` / AUTUMN BRILLIANCE SERVICEBERRY SINGLE STEM - STRONG CENTRAL LEADER	B & B	2" CAL	26	1/LA-3

GENERAL NOTES:

1. VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING WORK. BE AWARE OF ANY UNDERGROUND UTILITIES. PROTECT ALL EXISTING SITE FEATURES TO RESIST POTENTIAL DAMAGE BY SITE CONSTRUCTION OPERATIONS. AVOID ANY WORK BEYOND SCOPE OF PROJECT AREA.
2. COORDINATE ALL DISCIPLINES AND SITE CONSTRUCTION THAT WILL BE NEEDED TO COMPLETE THE PROJECT IN THE TIME FRAME GIVEN AND WITHIN BUDGET. ALL ACCESS TO SITE, USE OF UTILITIES, STORAGE, AND OTHER REQUIREMENTS SHALL BE COORDINATED PRIOR TO BEGINNING WORK.
3. NOTIFY OWNER/LANDSCAPE ARCHITECT IMMEDIATELY UPON DISCOVERY OF UNFORESEEN SITE CONDITIONS OR PLAN DISCREPANCIES. NO CHANGE TO SPECIFIED WORK SHALL BE COMPLETED WITHOUT VERIFICATION OF EXISTING CONDITIONS AND WRITTEN APPROVAL OF MODIFICATION BY THE LANDSCAPE ARCHITECT.

PLANTING NOTES:

1. LANDSCAPE CONTRACTOR SHALL LOCATE ALL TREES, SHRUBS AND PLANTING BEDS ACCORDING TO LOCATIONS SHOWN ON DRAWINGS. ALL PLANTING LOCATIONS SHALL BE SUBJECT TO REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO THE START OF PLANTING OPERATIONS. LANDSCAPE CONTRACTOR SHALL MAKE MODIFICATIONS IN LOCATIONS AS DIRECTED BY LANDSCAPE ARCHITECT.
2. THE PLANT SCHEDULE IS FOR CONTRACTOR'S CONVENIENCE ONLY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING EXISTING CONDITIONS AND REPORTING IN WRITING TO THE LANDSCAPE ARCHITECT ANY CONFLICTS RELATIVE TO IMPLEMENTATION OF THE LANDSCAPE CONSTRUCTION DOCUMENTS. BCRA SHALL NOT ASSUME ANY ERRORS OR OMISSIONS IN THE PLANT SCHEDULE LISTED HEREIN. THE PLANT SYMBOLS SHOWN ON THE LANDSCAPE PLAN SHALL PREVAIL SHOULD THERE BE ANY DISCREPANCIES IN QUANTITIES BETWEEN THE PLAN AND PLANT SCHEDULE.
3. LANDSCAPE CONTRACTOR SHALL PROVIDE PLANT PROTECTION AND MAINTENANCE THROUGHOUT INSTALLATION AND UNTIL FINAL ACCEPTANCE OF LANDSCAPE INSTALLATION AS FOLLOWS:
   A) ALL PLANT MATERIAL SHALL BE PROTECTED, FROM TIME OF DIGGING TO TIME OF FINAL ACCEPTANCE, FROM INJURY, EXCESSIVE DRYING FROM WINDS, IMPROPER VENTILATION, OVER-WATERING, FREEZING, HIGH TEMPERATURES, OR ANY OTHER CONDITION DAMAGING TO PLANTS.
   B) PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY IF POSSIBLE. ALL PLANTS NOT PLANTED ON THE DAY OF DELIVERY SHALL BE PLACED IN A TEMPORARY NURSERY AND KEPT MOIST, SHADED, AND PROTECTED FROM THE SUN AND WIND. EACH ROOTBALL SHALL BE COVERED ENTIRELY WITH MULCH. ALL PLANT MATERIALS SHALL BE INSTALLED PER THE PLAN DRAWINGS AND SPECIFICATIONS.

   LANDSCAPE CONTRACTOR SHALL PROVIDE PLANT MATERIALS THAT COMPLY WITH THE REQUIREMENTS OF THE MOST RECENT ANSI Z 60.1 "STANDARDS FOR NURSERY STOCK"' UNLESS OTHERWISE SPECIFIED. CALIPER OF B&B TREES SHALL BE TAKEN 6 INCHES ABOVE THE GROUND UP TO AND INCLUDING 4 INCH CALIPER SIZE, AND 12 INCHES ABOVE THE GROUND FOR LARGER SIZES.
   A) PLANTING MAINTENANCE SHALL INCLUDE WATERING, WEEDING, CULTIVATING, RESETTING PLANTS TO PROPER GRADES OR POSITION, RE-ESTABLISHING SETTLED GRADES. HERBICIDE IS NOT RECOMMENDED FOR ONE YEAR FOLLOWING LANDSCAPE INSTALLATION.
   B) PLANT MAINTENANCE SHALL INCLUDE THOSE OPERATIONS NECESSARY TO PROPER GROWTH AND SURVIVAL OF ALL PLANT MATERIALS. CONTRACTOR SHALL PROVIDE THIS WORK IN ADDITION TO SPECIFIC WARRANTY/GUARANTEES.
4. CONTRACTOR SHALL VERIFY AND MAINTAIN ALL SETBACKS, UTILITY CLEARANCES AND SIGHT TRIANGLES REQUIRED BY ALL LOCAL AND MUNICIPAL CODES WHERE APPLICABLE.
5. LANDSCAPE CONTRACTOR SHALL ENSURE THAT THE LANDSCAPE INSTALLATION IS COORDINATED WITH THE PLANS PREPARED BY OTHER CONSULTANTS SO THAT THE PROPOSED GRADING, STORM DRAINAGE OR OTHER PROPOSED CONSTRUCTION DOES NOT CONFLICT WITH NOR PRECLUDE INSTALLATION AND MAINTENANCE OF LANDSCAPE ELEMENTS AS DESIGNATED ON THIS PLAN.
6. ALL PLANTING AREAS ARE TO RECEIVE 2" DEPTH OF MULCH CONSISTING OF A 50% FINE BARK / 50% ORGANIC MULCH MIXTURE.
7. ALL PROPOSED TREES SHALL BE INSTALLED WITH SLOW RELEASE GATOR/WATER BAGS UNTIL TREES ARE ESTABLISHED. INSTALL AND MAINTAIN PER MANUFACTURER SPECIFICATIONS.

STATE OF WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT
JON C. McNAMARA
LICENSE NO. 903
EXPIRES ON 06/29/2020

20 10 0 20

SCALE: 1"=20'

Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: NICK CORIGLIANO
ENTERED BY: ROBERT BEALS
CHECKED BY: BEN DORT, PE
PROJECT ENGINEER: SHANNON PODGORSKI, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

bcra
T 253.627.4367 F 253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

CITY OF LAKEWOOD, WA 1996

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS

DRAWING NAME: LANDSCAPING EAST PLAN VIEW - SCHEDULE DETAILS AND NOTES

PROJECT: 302.0138
DRAWING: LA3
SHEET: 52 of 64

P:\19000\19046.00.00 - Onyx Dr Improvements\Civil\07-CAD\BCRA\Production Dwgs\19046C LA-PLPL.dwg 2/11/20

LEGEND

DESCRIPTION	PROPOSED	EXISTING
RIGHT–OF–WAY	——— — — ———	——— — — ———
CONDUIT	— — — — — —	— — — — — —
CONSTRUCTION NOTE	⟨#⟩	
LUMINAIRE POLE NOTE	⟨#⟩	
WIRE NOTE	⟨#⟩	
LUMINAIRE	⊗—■	⊗—■
TYPE 1 JUNCTION BOX	■	
TYPE 2 JUNCTION BOX	◪	
SERVICE CABINET	▣	

CONSTRUCTION NOTES

1. INSTALL NEW 136W CREE LED LUMINAIRE FIXTURE WITH BACKLIGHT SHIELD AND TYPE 2 DISTRIBUTION (RSWL–A–HT–2ME–14L–27K8–BLSL) ON 10' MAST ARM AT A 35' MOUNTING HEIGHT. INSTALL ALUMINUM POLE, ARM, AND FOUNDATION PER CITY OF LAKEWOOD STANDARD PLAN IS–06.
2. INSTALL TYPE 1 JUNCTION BOX PER WSDOT STANDARD PLAN J–40.10–04.
3. INSTALL TYPE 2 JUNCTION BOX PER WSDOT STANDARD PLAN J–40.10–04.
4. REMOVE AND SALVAGE EXISTING LUMINAIRE FIXTURE. REPLACE WITH NEW 136W CREE LED LUMINAIRE FIXTURE WITH BACKLIGHT SHIELD AND TYPE 2 DISTRIBUTION (RSWL–A–HT–2ME–14L–27K8–BLSL) ON EXISTING MAST ARM.
5. EXISTING LUMINAIRE TO REMAIN.
6. REMOVE EXISTING LUMINAIRE, MAST ARM, POLE, AND FOUNDATION.
7. INSTALL NEW 136W CREE LED LUMINAIRE FIXTURE WITH BACKLIGHT SHIELD AND TYPE 3 DISTRIBUTION (RSWL–A–HT–3ME–14L–27K8–BLSL) ON 10' MAST ARM AT A 35' MOUNTING HEIGHT. INSTALL ALUMINUM POLE, ARM, AND FOUNDATION PER CITY OF LAKEWOOD STANDARD PLAN IS–06.
8. INSTALL NEW 136W CREE LED LUMINAIRE FIXTURE WITH BACKLIGHT SHIELD AND TYPE 2 DISTRIBUTION (RSWL–A–HT–2ME–14L–27K8–BLSL) ON 12' MAST ARM AT A 35' MOUNTING HEIGHT. INSTALL ALUMINUM POLE, ARM, AND FOUNDATION PER CITY OF LAKEWOOD STANDARD PLAN IS–06.
9. INSTALL NEW SERVICE CABINET AND PEDESTAL PER CITY OF LAKEWOOD STANDARD PLAN IS–04.
10. INTERCEPT EXISTING CONDUIT. SPLICE NEW ILLUMINATION CONDUCTOR INTO EXISTING ILLUMINATION CIRCUIT.
11. COORDINATE FINAL POWER CONNECTION WITH TACOMA POWER.

GENERAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH CITY OF LAKEWOOD STANDARD SPECIFICATIONS, CITY OF LAKEWOOD STANDARD PLANS, AND THE CONTRACT, UNLESS OTHERWISE NOTED. A COPY OF THESE DOCUMENTS SHALL BE ON SITE DURING CONSTRUCTION.
2. A COPY OF THE APPROVED PLAN SHALL BE ON SITE DURING CONSTRUCTION.
3. ALL PERMITS REQUIRED FOR WORK WITHIN THE PUBLIC RIGHT OF WAY MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
4. THE LOCATION OF EXISTING FEATURES AND UTILITIES SHOWN WITHIN THESE PLANS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCING LIGHTING AND ANY OTHER UNDERGROUND WORK. NOT ALL EXISTING FEATURES AND UTILITIES MAY BE SHOWN.
5. THE CONTRACTOR SHALL SEQUENCE WORK TO MAINTAIN EXISTING LIGHTING EQUIPMENT IN–PLACE AND OPERATIONAL UNTIL FINAL LIGHTING EQUIPMENT IS OPERATIONAL, UNLESS OTHERWISE APPROVED IN WRITING BY CITY OF LAKEWOOD.
6. ALL WORK SHALL BE CONSISTENT WITH UTILITY AGENCY REQUIREMENTS. THE CONTRACTOR SHALL CONTACT UTILITY AGENCIES 48 HOURS PRIOR TO COMMENCING WORK AND SHALL COORDINATE WITH ALL AFFECTED UTILITY AGENCIES THROUGHOUT THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING UTILITIES RESULTING FROM CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL NOTIFY THE AFFECTED UTILITY AGENCY IMMEDIATELY UPON DAMAGE AND SHALL BE RESPONSIBLE FOR REPLACING DAMAGED EQUIPMENT TO THE SATISFACTION OF THE AFFECTED UTILITY AGENCY.
7. THE CONTRACTOR SHALL SALVAGE AND DELIVER ALL EXISTING LIGHTING EQUIPMENT SPECIFIED FOR REMOVAL BACK TO CITY OF LAKEWOOD, UNLESS OTHERWISE NOTED IN WRITING BY THE ENGINEER.
8. THE LOCATIONS OF PROPOSED CONDUITS AND JUNCTION BOXES SHOWN IN THESE PLANS ARE GRAPHICAL REPRESENTATIONS ONLY. THE CONTRACTOR SHALL FIELD VERIFY FINAL LOCATIONS WITH THE ENGINEER PRIOR TO INSTALLATION.
9. POLE LOCATIONS SHALL BE STAKED IN FIELD, POTHOLED TO VERIFY NO POTENTIAL UTILITY CONFLICTS EXISTS, AND APPROVED BY THE ENGINEER PRIOR TO EXCAVATION.
10. THE CONTRACTOR SHALL INSTALL PULL TAPE/ROPE WITHIN ALL PROPOSED SPARE CONDUIT.
11. PROPOSED JUNCTION BOXES LOCATED WITHIN SIDEWALKS AND CURB RAMPS SHALL BE EQUIPPED WITH SLIP–RESISTANT LIDS.
12. TYPE 1 AND 2 JUNCTION BOXES SHALL BE INSTALLED PER WSDOT STANDARD PLAN J–40.10–04.
13. THE CONTRACTOR SHALL LABEL ALL CONDUCTORS FOR STREET LIGHTS WITHIN EACH JUNCTION BOX.
14. THE CONTRACTOR SHALL REMOVE ALL EXISTING CONDUCTORS ASSOCIATED WITH EXISTING LIGHTING EQUIPMENT SPECIFIED FOR REMOVAL, UNLESS OTHERWISE NOTED. CAP AND ABANDON EXISTING UNUSED CONDUIT. REMOVE PORTIONS OF ABANDONED CONDUIT WHERE IN CONFLICT WITH NEW CONDUIT, UNLESS OTHERWISE NOTED.
15. THE CONTRACTOR SHALL TRIM BACK VEGETATION WITHIN RIGHT–OF–WAY WHERE NECESSARY TO AVOID CONFLICTS WITH PROPOSED LUMINAIRES.

LIGHT LEVELS

INTERSECTION / ROADWAY	MINIMUM LIGHT LEVEL (FC)		UNIFORMITY (AVG / MIN)	
	TARGET	CALCULATED	TARGET	CALCULATED
INTERSECTION				
ONYX DR & 97TH AVE	1.00	1.03	4:1	2.86
ONYX DR & 96TH AVE	1.00	1.02	4:1	3.40
ONYX DR & 95TH AVE	1.00	1.04	4:1	2.67
ONYX DR & 94TH AVE	1.00	1.11	4:1	2.27
ONYX DR & 93RD AVE	1.00	1.16	4:1	2.27
ONYX DR & 78TH ST	1.00	1.01	4:1	3.74
ONYX DR & ONYX CT	1.00	1.01	4:1	3.37
ONYX DR & ONYX DR CT	1.00	0.91	4:1	3.79
ONYX DR & ONYX CT	1.00	1.00	4:1	3.45
ONYX DR & 90TH AVE	1.00	1.02	4:1	3.52
ONYX DR & 89TH AVE	1.00	1.00	4:1	3.45
ONYX DR & 88TH AVE	1.00	1.13	4:1	3.42
ONYX DR & 87TH AVE	1.00	1.16	4:1	2.76
ROADWAY				
ONYX DR (97TH AVE TO 96TH AVE)	0.60	0.79	4:1	2.32
ONYX DR (96TH AVE TO 95TH AVE)	0.60	0.65	4:1	2.24
ONYX DR (95TH AVE TO 94TH AVE)	0.60	0.75	4:1	2.78
ONYX DR (94TH AVE TO 93RD AVE)	0.60	0.74	4:1	1.25
ONYX DR (93RD AVE TO 78TH ST)	0.60	0.72	4:1	3.13
ONYX DR (78TH ST TO ONYX CT)	0.60	0.78	4:1	3.71
ONYX DR (ONYX CT TO ONYX DR CT)	0.60	0.83	4:1	3.77
ONYX DR (ONYX DR CT TO ONYX CT)	0.60	0.85	4:1	3.27
ONYX DR (ONYX CT TO 90TH AVE)	0.60	1.01	4:1	2.46
ONYX DR (90TH AVE TO 89TH AVE)	0.60	0.85	4:1	3.70
ONYX DR (89TH AVE TO 88TH AVE)	0.60	1.11	4:1	2.78
ONYX DR (88TH AVE TO 87TH AVE)	0.60	0.75	4:1	3.26
87TH AVE N	0.60	0.82	4:1	2.83
87TH AVE S	0.60	0.79	4:1	3.95

Know what's **below.** **Call** before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: D NKEIRUKA / T LE, PE
ENTERED BY: D NKEIRUKA / T LE, PE
CHECKED BY: BRYCE KINNEY, PE
PROJECT ENGINEER: BRYCE KINNEY, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

transpogroup
WHAT TRANSPORTATION CAN BE.
12131 113TH AVENUE NE, SUITE 203
KIRKLAND, WASHINGTON 98034
(TEL) 425 821-3665
(FAX) 425 825-8434

CITY OF LAKEWOOD, WA • 1996 •

BRYCE M. KINNEY — STATE OF WASHINGTON — 54283 — REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: ILLUMINATION NOTES (WEST)

PROJECT: 302.0138
DRAWING: IL01
SHEET: 53 of 64

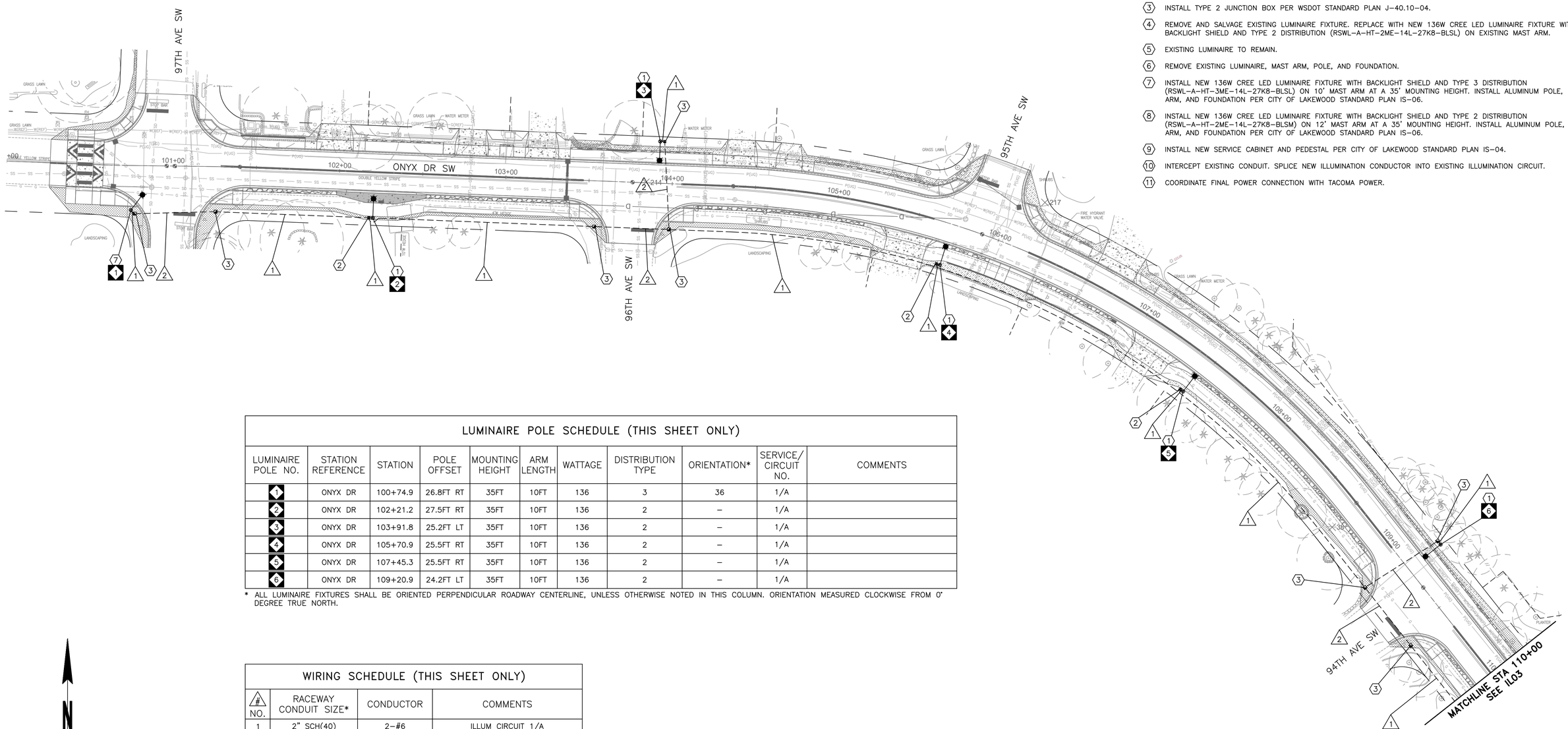
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NOTES

1. SEE SHEET IL01 FOR GENERAL NOTES, LEGEND, AND LIGHT LEVELS.

CONSTRUCTION NOTES

1. INSTALL NEW 136W CREE LED LUMINAIRE FIXTURE WITH BACKLIGHT SHIELD AND TYPE 2 DISTRIBUTION (RSWL-A-HT-2ME-14L-27K8-BLSL) ON 10' MAST ARM AT A 35' MOUNTING HEIGHT. INSTALL ALUMINUM POLE, ARM, AND FOUNDATION PER CITY OF LAKEWOOD STANDARD PLAN IS-06.
2. INSTALL TYPE 1 JUNCTION BOX PER WSDOT STANDARD PLAN J-40.10-04.
3. INSTALL TYPE 2 JUNCTION BOX PER WSDOT STANDARD PLAN J-40.10-04.
4. REMOVE AND SALVAGE EXISTING LUMINAIRE FIXTURE. REPLACE WITH NEW 136W CREE LED LUMINAIRE FIXTURE WITH BACKLIGHT SHIELD AND TYPE 2 DISTRIBUTION (RSWL-A-HT-2ME-14L-27K8-BLSL) ON EXISTING MAST ARM.
5. EXISTING LUMINAIRE TO REMAIN.
6. REMOVE EXISTING LUMINAIRE, MAST ARM, POLE, AND FOUNDATION.
7. INSTALL NEW 136W CREE LED LUMINAIRE FIXTURE WITH BACKLIGHT SHIELD AND TYPE 3 DISTRIBUTION (RSWL-A-HT-3ME-14L-27K8-BLSL) ON 10' MAST ARM AT A 35' MOUNTING HEIGHT. INSTALL ALUMINUM POLE, ARM, AND FOUNDATION PER CITY OF LAKEWOOD STANDARD PLAN IS-06.
8. INSTALL NEW 136W CREE LED LUMINAIRE FIXTURE WITH BACKLIGHT SHIELD AND TYPE 2 DISTRIBUTION (RSWL-A-HT-2ME-14L-27K8-BLSM) ON 12' MAST ARM AT A 35' MOUNTING HEIGHT. INSTALL ALUMINUM POLE, ARM, AND FOUNDATION PER CITY OF LAKEWOOD STANDARD PLAN IS-06.
9. INSTALL NEW SERVICE CABINET AND PEDESTAL PER CITY OF LAKEWOOD STANDARD PLAN IS-04.
10. INTERCEPT EXISTING CONDUIT. SPLICE NEW ILLUMINATION CONDUCTOR INTO EXISTING ILLUMINATION CIRCUIT.
11. COORDINATE FINAL POWER CONNECTION WITH TACOMA POWER.



LUMINAIRE POLE SCHEDULE (THIS SHEET ONLY)

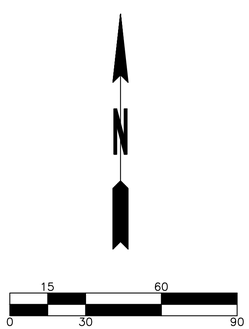
LUMINAIRE POLE NO.	STATION REFERENCE	STATION	POLE OFFSET	MOUNTING HEIGHT	ARM LENGTH	WATTAGE	DISTRIBUTION TYPE	ORIENTATION*	SERVICE/ CIRCUIT NO.	COMMENTS
1	ONYX DR	100+74.9	26.8FT RT	35FT	10FT	136	3	36	1/A	
2	ONYX DR	102+21.2	27.5FT RT	35FT	10FT	136	2	–	1/A	
3	ONYX DR	103+91.8	25.2FT LT	35FT	10FT	136	2	–	1/A	
4	ONYX DR	105+70.9	25.5FT RT	35FT	10FT	136	2	–	1/A	
5	ONYX DR	107+45.3	25.5FT RT	35FT	10FT	136	2	–	1/A	
6	ONYX DR	109+20.9	24.2FT LT	35FT	10FT	136	2	–	1/A	

* ALL LUMINAIRE FIXTURES SHALL BE ORIENTED PERPENDICULAR ROADWAY CENTERLINE, UNLESS OTHERWISE NOTED IN THIS COLUMN. ORIENTATION MEASURED CLOCKWISE FROM 0° DEGREE TRUE NORTH.

WIRING SCHEDULE (THIS SHEET ONLY)

# NO.	RACEWAY CONDUIT SIZE*	CONDUCTOR	COMMENTS
1	2" SCH(40)	2–#6	ILLUM CIRCUIT 1/A
2	2" SCH(80)	2–#6	ILLUM CIRCUIT 1/A
	2" SCH(80)	SPARE WITH PULL ROPE	

* ALL CONDUIT SHALL BE PVC AND SHALL CONTAIN A GROUND WIRE EQUAL IN SIZE TO THE LARGEST CONDUCTOR (MINIMUM NO. 6) UNLESS OTHERWISE NOTED.



Know what's **below.** **Call** before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: D NKEIRUKA / T LE, PE
ENTERED BY: D NKEIRUKA / T LE, PE
CHECKED BY: BRYCE KINNEY, PE
PROJECT ENGINEER: BRYCE KINNEY, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

transpogroup
WHAT TRANSPORTATION CAN BE.
12131 113TH AVENUE NE, SUITE 203
KIRKLAND, WASHINGTON 98034
(TEL) 425 821-3665
(FAX) 425 825-8434

CITY OF LAKEWOOD, WA 1996

BRYCE M. KINNEY 54283 REGISTERED PROFESSIONAL ENGINEER STATE OF WASHINGTON

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: ILLUMINATION PLAN (WEST)
PROJECT: 302.0138
DRAWING: IL02
SHEET: 54 of 64

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NOTES

1. SEE SHEET IL01 FOR GENERAL NOTES, LEGEND, AND LIGHT LEVELS.

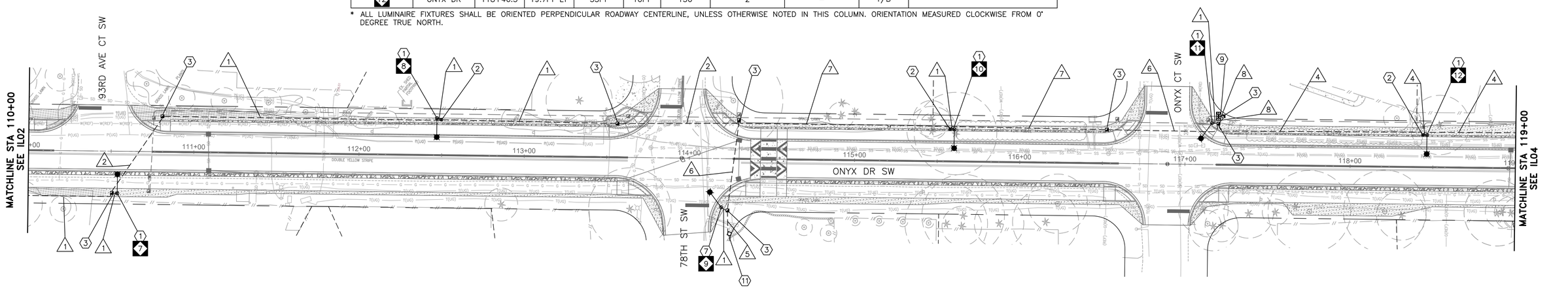
CONSTRUCTION NOTES

1. INSTALL NEW 136W CREE LED LUMINAIRE FIXTURE WITH BACKLIGHT SHIELD AND TYPE 2 DISTRIBUTION (RSWL-A-HT-2ME-14L-27K8-BLSL) ON 10' MAST ARM AT A 35' MOUNTING HEIGHT. INSTALL ALUMINUM POLE, ARM, AND FOUNDATION PER CITY OF LAKEWOOD STANDARD PLAN IS-06.
2. INSTALL TYPE 1 JUNCTION BOX PER WSDOT STANDARD PLAN J-40.10-04.
3. INSTALL TYPE 2 JUNCTION BOX PER WSDOT STANDARD PLAN J-40.10-04.
4. REMOVE AND SALVAGE EXISTING LUMINAIRE FIXTURE. REPLACE WITH NEW 136W CREE LED LUMINAIRE FIXTURE WITH BACKLIGHT SHIELD AND TYPE 2 DISTRIBUTION (RSWL-A-HT-2ME-14L-27K8-BLSL) ON EXISTING MAST ARM.
5. EXISTING LUMINAIRE TO REMAIN.
6. REMOVE EXISTING LUMINAIRE, MAST ARM, POLE, AND FOUNDATION.
7. INSTALL NEW 136W CREE LED LUMINAIRE FIXTURE WITH BACKLIGHT SHIELD AND TYPE 3 DISTRIBUTION (RSWL-A-HT-3ME-14L-27K8-BLSL) ON 10' MAST ARM AT A 35' MOUNTING HEIGHT. INSTALL ALUMINUM POLE, ARM, AND FOUNDATION PER CITY OF LAKEWOOD STANDARD PLAN IS-06.
8. INSTALL NEW 136W CREE LED LUMINAIRE FIXTURE WITH BACKLIGHT SHIELD AND TYPE 2 DISTRIBUTION (RSWL-A-HT-2ME-14L-27K8-BLSM) ON 12' MAST ARM AT A 35' MOUNTING HEIGHT. INSTALL ALUMINUM POLE, ARM, AND FOUNDATION PER CITY OF LAKEWOOD STANDARD PLAN IS-06.
9. INSTALL NEW SERVICE CABINET AND PEDESTAL PER CITY OF LAKEWOOD STANDARD PLAN IS-04.
10. INTERCEPT EXISTING CONDUIT. SPLICE NEW ILLUMINATION CONDUCTOR INTO EXISTING ILLUMINATION CIRCUIT.
11. COORDINATE FINAL POWER CONNECTION WITH TACOMA POWER.

LUMINAIRE POLE SCHEDULE (THIS SHEET ONLY)

LUMINAIRE POLE NO.	STATION REFERENCE	STATION	POLE OFFSET	MOUNTING HEIGHT	ARM LENGTH	WATTAGE	DISTRIBUTION TYPE	ORIENTATION*	SERVICE/ CIRCUIT NO.	COMMENTS
7	ONYX DR	110+72.7	25.3FT RT	35FT	10FT	136	2	–	1/A	
8	ONYX DR	112+46.9	22.4FT LT	35FT	10FT	136	2	–	1/A	
9	ONYX DR	114+19.6	29.6FT RT	35FT	10FT	136	3	14	1/A	
10	ONYX DR	115+60.1	19.5FT LT	35FT	10FT	136	2	–	1/A	
11	ONYX DR	117+16.1	25.2FT LT	35FT	10FT	136	2	267	1/A	
12	ONYX DR	118+46.3	19.7FT LT	35FT	10FT	136	2	–	1/B	

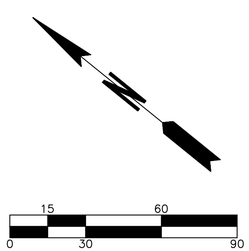
* ALL LUMINAIRE FIXTURES SHALL BE ORIENTED PERPENDICULAR ROADWAY CENTERLINE, UNLESS OTHERWISE NOTED IN THIS COLUMN. ORIENTATION MEASURED CLOCKWISE FROM 0° DEGREE TRUE NORTH.



WIRING SCHEDULE (THIS SHEET ONLY)

# NO.	RACEWAY CONDUIT SIZE*	CONDUCTOR	COMMENTS
1	2" SCH(40)	2-#6	ILLUM CIRCUIT 1/A
2	2" SCH(80)	2-#6	ILLUM CIRCUIT 1/A
	2" SCH(80)	SPARE WITH PULL ROPE	
3	2" SCH(40)	4-#6	ILLUM CIRCUITS 1/A, 1B
	3" SCH(40)	SPARE WITH PULL ROPE	
4	2" SCH(40)	2-#6	ILLUM CIRCUIT 1/B
5	2" SCH(40)	**	SERVICE POWER
6	2" SCH(80)	2-#6, **	ILLUM CIRCUIT 1/A, SERVICE POWER
	2" SCH(80)	SPARE WITH PULL ROPE	
7	2" SCH(40)	2-#6, **	ILLUM CIRCUIT 1/A, SERVICE POWER
8	2" SCH(40)	4-#6, **	ILLUM CIRCUITS 1/A, 1B, SERVICE POWER
	3" SCH(40)	SPARE WITH PULL ROPE	

* ALL CONDUIT SHALL BE PVC AND SHALL CONTAIN A GROUND WIRE EQUAL IN SIZE TO THE LARGEST CONDUCTOR (MINIMUM NO. 6) UNLESS OTHERWISE NOTED.
** COORDINATE WITH TACOMA POWER FOR SERVICE POWER CONDUCTOR SIZE.



Know what's **below.** **Call** before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: D NKEIRUKA / T LE, PE
ENTERED BY: D NKEIRUKA / T LE, PE
CHECKED BY: BRYCE KINNEY, PE
PROJECT ENGINEER: BRYCE KINNEY, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

transpogroup
WHAT TRANSPORTATION CAN BE.
12131 113TH AVENUE NE, SUITE 203 KIRKLAND, WASHINGTON 98034
(TEL) 425 821-3665 (FAX) 425 825-8434

CITY OF LAKEWOOD, WA 1996

BRYCE M. KINNEY STATE OF WASHINGTON 54283 REGISTERED PROFESSIONAL ENGINEER 3/11/20

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: ILLUMINATION PLAN (WEST)

PROJECT: 302.0138
DRAWING: IL03
SHEET: 55 of 64

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NOTES

1. SEE SHEET IL01 FOR GENERAL NOTES, LEGEND, AND LIGHT LEVELS.

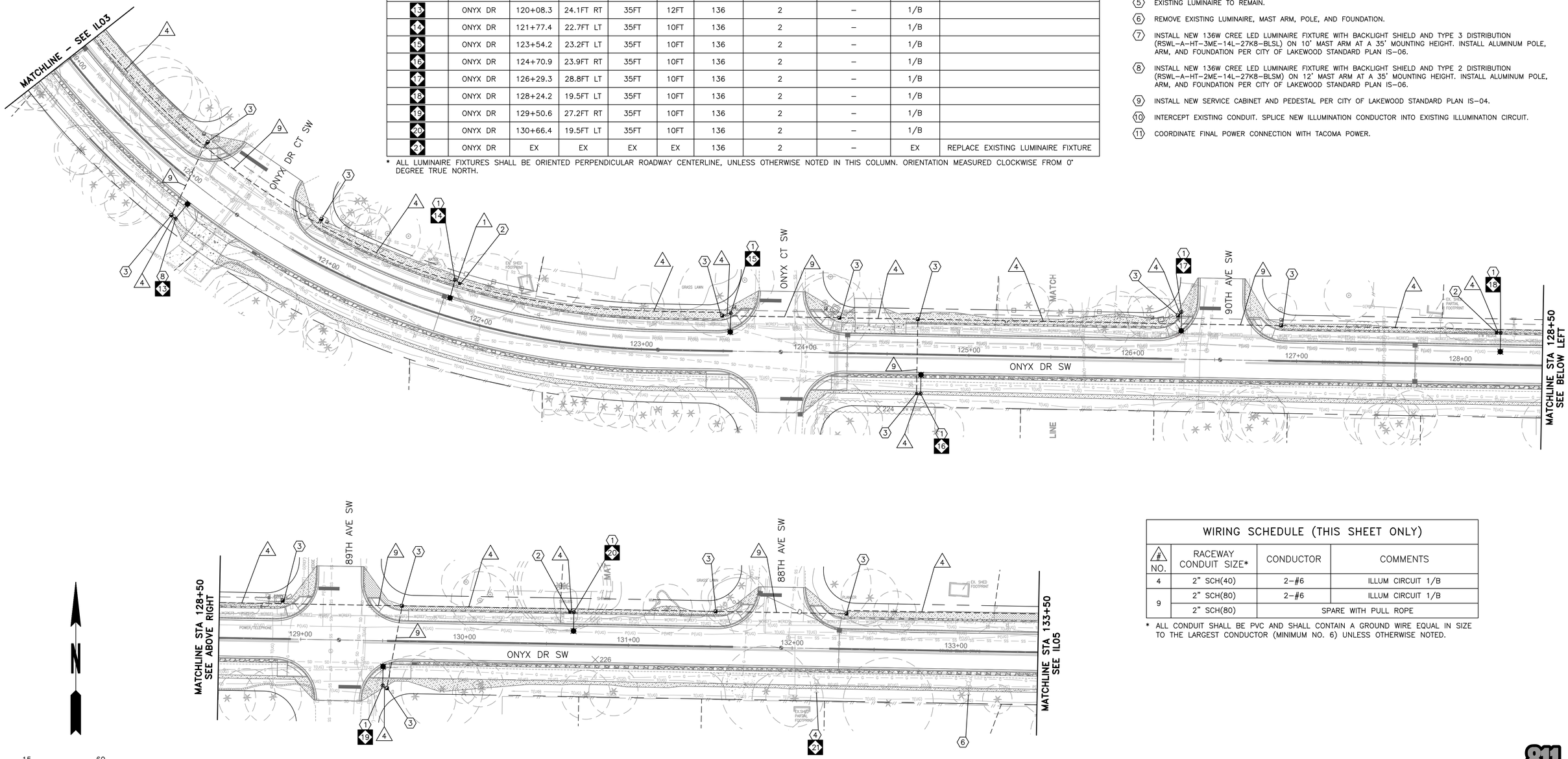
LUMINAIRE POLE SCHEDULE (THIS SHEET ONLY)

LUMINAIRE POLE NO.	STATION REFERENCE	STATION	POLE OFFSET	MOUNTING HEIGHT	ARM LENGTH	WATTAGE	DISTRIBUTION TYPE	ORIENTATION*	SERVICE/ CIRCUIT NO.	COMMENTS
13	ONYX DR	120+08.3	24.1FT RT	35FT	12FT	136	2	–	1/B	
14	ONYX DR	121+77.4	22.7FT LT	35FT	10FT	136	2	–	1/B	
15	ONYX DR	123+54.2	23.2FT LT	35FT	10FT	136	2	–	1/B	
16	ONYX DR	124+70.9	23.9FT RT	35FT	10FT	136	2	–	1/B	
17	ONYX DR	126+29.3	28.8FT LT	35FT	10FT	136	2	–	1/B	
18	ONYX DR	128+24.2	19.5FT LT	35FT	10FT	136	2	–	1/B	
19	ONYX DR	129+50.6	27.2FT RT	35FT	10FT	136	2	–	1/B	
20	ONYX DR	130+66.4	19.5FT LT	35FT	10FT	136	2	–	1/B	
21	ONYX DR	EX	EX	EX	EX	136	2	–	EX	REPLACE EXISTING LUMINAIRE FIXTURE

* ALL LUMINAIRE FIXTURES SHALL BE ORIENTED PERPENDICULAR ROADWAY CENTERLINE, UNLESS OTHERWISE NOTED IN THIS COLUMN. ORIENTATION MEASURED CLOCKWISE FROM 0° DEGREE TRUE NORTH.

CONSTRUCTION NOTES

1. INSTALL NEW 136W CREE LED LUMINAIRE FIXTURE WITH BACKLIGHT SHIELD AND TYPE 2 DISTRIBUTION (RSWL-A-HT-2ME-14L-27K8-BLSL) ON 10' MAST ARM AT A 35' MOUNTING HEIGHT. INSTALL ALUMINUM POLE, ARM, AND FOUNDATION PER CITY OF LAKEWOOD STANDARD PLAN IS-06.
2. INSTALL TYPE 1 JUNCTION BOX PER WSDOT STANDARD PLAN J-40.10-04.
3. INSTALL TYPE 2 JUNCTION BOX PER WSDOT STANDARD PLAN J-40.10-04.
4. REMOVE AND SALVAGE EXISTING LUMINAIRE FIXTURE. REPLACE WITH NEW 136W CREE LED LUMINAIRE FIXTURE WITH BACKLIGHT SHIELD AND TYPE 2 DISTRIBUTION (RSWL-A-HT-2ME-14L-27K8-BLSL) ON EXISTING MAST ARM.
5. EXISTING LUMINAIRE TO REMAIN.
6. REMOVE EXISTING LUMINAIRE, MAST ARM, POLE, AND FOUNDATION.
7. INSTALL NEW 136W CREE LED LUMINAIRE FIXTURE WITH BACKLIGHT SHIELD AND TYPE 3 DISTRIBUTION (RSWL-A-HT-3ME-14L-27K8-BLSL) ON 10' MAST ARM AT A 35' MOUNTING HEIGHT. INSTALL ALUMINUM POLE, ARM, AND FOUNDATION PER CITY OF LAKEWOOD STANDARD PLAN IS-06.
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9. INSTALL NEW SERVICE CABINET AND PEDESTAL PER CITY OF LAKEWOOD STANDARD PLAN IS-04.
10. INTERCEPT EXISTING CONDUIT. SPLICE NEW ILLUMINATION CONDUCTOR INTO EXISTING ILLUMINATION CIRCUIT.
11. COORDINATE FINAL POWER CONNECTION WITH TACOMA POWER.



WIRING SCHEDULE (THIS SHEET ONLY)

# NO.	RACEWAY CONDUIT SIZE*	CONDUCTOR	COMMENTS
4	2" SCH(40)	2-#6	ILLUM CIRCUIT 1/B
9	2" SCH(80)	2-#6	ILLUM CIRCUIT 1/B
	2" SCH(80)	SPARE WITH PULL ROPE	

* ALL CONDUIT SHALL BE PVC AND SHALL CONTAIN A GROUND WIRE EQUAL IN SIZE TO THE LARGEST CONDUCTOR (MINIMUM NO. 6) UNLESS OTHERWISE NOTED.

Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: D NKEIRUKA / T LE, PE
ENTERED BY: D NKEIRUKA / T LE, PE
CHECKED BY: BRYCE KINNEY, PE
PROJECT ENGINEER: BRYCE KINNEY, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

transpogroup
WHAT TRANSPORTATION CAN BE.
12131 113TH AVENUE NE, SUITE 203
KIRKLAND, WASHINGTON 98034
(TEL) 425 821-3665
(FAX) 425 825-8434

CITY OF LAKEWOOD, WA • 1996 •

BRYCE M. KINNEY, STATE OF WASHINGTON, 54283, REGISTERED PROFESSIONAL ENGINEER, 3/11/20

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: ILLUMINATION PLAN (WEST)

PROJECT: 302.0138
DRAWING: IL04
SHEET: 56 of 64

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NOTES

1. SEE SHEET IL01 FOR GENERAL NOTES, LEGEND, AND LIGHT LEVELS.

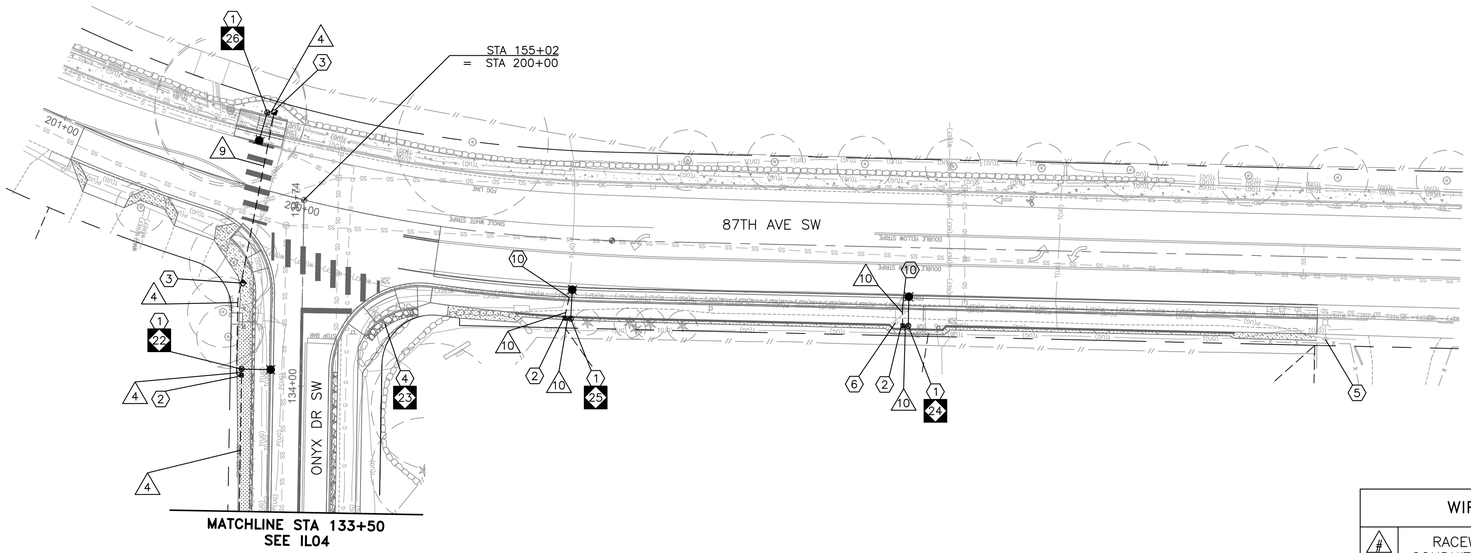
CONSTRUCTION NOTES

1. INSTALL NEW 136W CREE LED LUMINAIRE FIXTURE WITH BACKLIGHT SHIELD AND TYPE 2 DISTRIBUTION (RSWL-A-HT-2ME-14L-27K8-BLSL) ON 10' MAST ARM AT A 35' MOUNTING HEIGHT. INSTALL ALUMINUM POLE, ARM, AND FOUNDATION PER CITY OF LAKEWOOD STANDARD PLAN IS-06.
2. INSTALL TYPE 1 JUNCTION BOX PER WSDOT STANDARD PLAN J-40.10-04.
3. INSTALL TYPE 2 JUNCTION BOX PER WSDOT STANDARD PLAN J-40.10-04.
4. REMOVE AND SALVAGE EXISTING LUMINAIRE FIXTURE. REPLACE WITH NEW 136W CREE LED LUMINAIRE FIXTURE WITH BACKLIGHT SHIELD AND TYPE 2 DISTRIBUTION (RSWL-A-HT-2ME-14L-27K8-BLSL) ON EXISTING MAST ARM.
5. EXISTING LUMINAIRE TO REMAIN.
6. REMOVE EXISTING LUMINAIRE, MAST ARM, POLE, AND FOUNDATION.
7. INSTALL NEW 136W CREE LED LUMINAIRE FIXTURE WITH BACKLIGHT SHIELD AND TYPE 3 DISTRIBUTION (RSWL-A-HT-3ME-14L-27K8-BLSL) ON 10' MAST ARM AT A 35' MOUNTING HEIGHT. INSTALL ALUMINUM POLE, ARM, AND FOUNDATION PER CITY OF LAKEWOOD STANDARD PLAN IS-06.
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11. COORDINATE FINAL POWER CONNECTION WITH TACOMA POWER.

LUMINAIRE POLE SCHEDULE (THIS SHEET ONLY)

LUMINAIRE POLE NO.	STATION REFERENCE	STATION	POLE OFFSET	MOUNTING HEIGHT	ARM LENGTH	WATTAGE	DISTRIBUTION TYPE	ORIENTATION*	SERVICE/ CIRCUIT NO.	COMMENTS
22	ONYX DR	134+06.3	23.5FT LT	35FT	10FT	136	2	–	1/B	
23	ONYX DR	EX	EX	EX	EX	136	2	EX	EX	REPLACE EXISTING LUMINAIRE FIXTURE
24	87TH AVE SW	152+60.8	31.0FT LT	35FT	10FT	136	2	–	EX	
25	87TH AVE SW	153+93.6	31.5FT LT	35FT	10FT	136	2	–	EX	
26	87TH AVE SW	200+23.7	29.7FT RT	35FT	10FT	136	2	–	1/B	

* ALL LUMINAIRE FIXTURES SHALL BE ORIENTED PERPENDICULAR ROADWAY CENTERLINE, UNLESS OTHERWISE NOTED IN THIS COLUMN. ORIENTATION MEASURED CLOCKWISE FROM 0° DEGREE TRUE NORTH.



WIRING SCHEDULE (THIS SHEET ONLY)

# NO.	RACEWAY CONDUIT SIZE*	CONDUCTOR	COMMENTS
4	2" SCH(40)	2-#6	ILLUM CIRCUIT 1/B
9	2" SCH(80)	2-#6	ILLUM CIRCUIT 1/B
	2" SCH(80)	SPARE WITH PULL ROPE	
10	2" SCH(40)	2-#6**	EX ILLUM CIRCUIT

* ALL CONDUIT SHALL BE PVC AND SHALL CONTAIN A GROUND WIRE EQUAL IN SIZE TO THE LARGEST CONDUCTOR (MINIMUM NO. 6) UNLESS OTHERWISE NOTED.
** CONTRACTOR TO VERIFY EXISTING CONDUCTORS SIZE. NEW CONDUCTORS SHALL MATCH SIZE OF EXISTING CONDUCTORS.

N

15 0 30 60 90

Know what's **below.** **Call** before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: D NKEIRUKA / T LE, PE
ENTERED BY: D NKEIRUKA / T LE, PE
CHECKED BY: BRYCE KINNEY, PE
PROJECT ENGINEER: BRYCE KINNEY, PE
APPROVED BY: PAUL A. BUCICH, PE
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CITY OF LAKEWOOD, WA 1996

BRYCE M. KINNEY STATE OF WASHINGTON 54283 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: ILLUMINATION PLAN (WEST)

PROJECT 302.0138
DRAWING IL05
SHEET 57 of 64

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LEGEND

DESCRIPTION	PROPOSED	EXISTING
RIGHT–OF–WAY		
CONDUIT		
CONSTRUCTION NOTE	#	
LUMINAIRE POLE NOTE	#	
WIRE NOTE	#	
LUMINAIRE		
TYPE 1 JUNCTION BOX		
TYPE 2 JUNCTION BOX		
SERVICE CABINET		

CONSTRUCTION NOTES

1. INSTALL NEW 136W CREE LED LUMINAIRE FIXTURE WITH BACKLIGHT SHIELD AND TYPE 2 DISTRIBUTION (RSWL–A–HT–2ME–14L–27K8–BLSL) ON 10' MAST ARM AT A 35' MOUNTING HEIGHT. INSTALL ALUMINUM POLE, ARM, AND FOUNDATION PER CITY OF LAKEWOOD STANDARD PLAN IS–06.
2. INSTALL TYPE 1 JUNCTION BOX PER WSDOT STANDARD PLAN J–40.10–04.
3. INSTALL TYPE 2 JUNCTION BOX PER WSDOT STANDARD PLAN J–40.10–04.
4. REMOVE AND SALVAGE EXISTING LUMINAIRE. REPLACE WITH NEW 136W CREE LED LUMINAIRE FIXTURE WITH BACKLIGHT SHIELD AND TYPE 3 DISTRIBUTION (RSWM–A–HT–3ME–9L–27K8–BLSL) ON EXISTING MAST ARM.
5. EXISTING LUMINAIRE TO REMAIN.
6. REMOVE EXISTING LUMINAIRE AND MAST ARM FROM EXISTING TIMBER POLE.
7. INSTALL NEW 136W CREE LED LUMINAIRE FIXTURE WITH BACKLIGHT SHIELD AND TYPE 3 DISTRIBUTION (RSWL–A–HT–3ME–14L–27K8–BLSL) ON 10' MAST ARM AT A 35' MOUNTING HEIGHT. INSTALL ALUMINUM POLE, ARM, AND FOUNDATION PER CITY OF LAKEWOOD STANDARD PLAN IS–06.
8. INSTALL NEW SERVICE CABINET AND PEDESTAL PER CITY OF LAKEWOOD STANDARD PLAN IS–04.
9. COORDINATE FINAL POWER CONNECTION WITH TACOMA POWER.

GENERAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH CITY OF LAKEWOOD STANDARD SPECIFICATIONS, CITY OF LAKEWOOD STANDARD PLANS, AND THE CONTRACT, UNLESS OTHERWISE NOTED. A COPY OF THESE DOCUMENTS SHALL BE ON SITE DURING CONSTRUCTION.
2. A COPY OF THE APPROVED PLAN SHALL BE ON SITE DURING CONSTRUCTION.
3. ALL PERMITS REQUIRED FOR WORK WITHIN THE PUBLIC RIGHT OF WAY MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
4. THE LOCATION OF EXISTING FEATURES AND UTILITIES SHOWN WITHIN THESE PLANS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCING LIGHTING AND ANY OTHER UNDERGROUND WORK. NOT ALL EXISTING FEATURES AND UTILITIES MAY BE SHOWN.
5. THE CONTRACTOR SHALL SEQUENCE WORK TO MAINTAIN EXISTING LIGHTING EQUIPMENT IN–PLACE AND OPERATIONAL UNTIL FINAL LIGHTING EQUIPMENT IS OPERATIONAL, UNLESS OTHERWISE APPROVED IN WRITING BY CITY OF LAKEWOOD.
6. ALL WORK SHALL BE CONSISTENT WITH UTILITY AGENCY REQUIREMENTS. THE CONTRACTOR SHALL CONTACT UTILITY AGENCIES 48 HOURS PRIOR TO COMMENCING WORK AND SHALL COORDINATE WITH ALL AFFECTED UTILITY AGENCIES THROUGHOUT THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING UTILITIES RESULTING FROM CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL NOTIFY THE AFFECTED UTILITY AGENCY IMMEDIATELY UPON DAMAGE AND SHALL BE RESPONSIBLE FOR REPLACING DAMAGED EQUIPMENT TO THE SATISFACTION OF THE AFFECTED UTILITY AGENCY.
7. THE CONTRACTOR SHALL SALVAGE AND DELIVER ALL EXISTING LIGHTING EQUIPMENT SPECIFIED FOR REMOVAL BACK TO CITY OF LAKEWOOD, UNLESS OTHERWISE NOTED IN WRITING BY THE ENGINEER.
8. THE LOCATIONS OF PROPOSED CONDUITS AND JUNCTION BOXES SHOWN IN THESE PLANS ARE GRAPHICAL REPRESENTATIONS ONLY. THE CONTRACTOR SHALL FIELD VERIFY FINAL LOCATIONS WITH THE ENGINEER PRIOR TO INSTALLATION.
9. POLE LOCATIONS SHALL BE STAKED IN FIELD, POTHOLED TO VERIFY NO POTENTIAL UTILITY CONFLICTS EXISTS, AND APPROVED BY THE ENGINEER PRIOR TO EXCAVATION.
10. THE CONTRACTOR SHALL INSTALL PULL TAPE/ROPE WITHIN ALL PROPOSED SPARE CONDUIT.
11. PROPOSED JUNCTION BOXES LOCATED WITHIN SIDEWALKS AND CURB RAMPS SHALL BE EQUIPPED WITH SLIP–RESISTANT LIDS.
12. TYPE 1 AND 2 JUNCTION BOXES SHALL BE INSTALLED PER WSDOT STANDARD PLAN J–40.10–04.
13. THE CONTRACTOR SHALL LABEL ALL CONDUCTORS FOR STREET LIGHTS WITHIN EACH JUNCTION BOX.
14. THE CONTRACTOR SHALL REMOVE ALL EXISTING CONDUCTORS ASSOCIATED WITH EXISTING LIGHTING EQUIPMENT SPECIFIED FOR REMOVAL, UNLESS OTHERWISE NOTED. CAP AND ABANDON EXISTING UNUSED CONDUIT. REMOVE PORTIONS OF ABANDONED CONDUIT WHERE IN CONFLICT WITH NEW CONDUIT, UNLESS OTHERWISE NOTED.
15. THE CONTRACTOR SHALL TRIM BACK VEGETATION WITHIN RIGHT–OF–WAY WHERE NECESSARY TO AVOID CONFLICTS WITH PROPOSED LUMINAIRES.

LIGHT LEVELS

INTERSECTION / ROADWAY	MINIMUM LIGHT LEVEL (FC)		UNIFORMITY (AVG / MIN)	
	TARGET	CALCULATED	TARGET	CALCULATED
INTERSECTION				
ONYX DR & GARNET LN	1.00	1.02	4:1	2.91
ONYX DR & CORAL LN	1.00	1.14	4:1	3.80
ONYX DR & PHILIPS RD	1.00	1.04	4:1	3.06
ONYX DR & PHILIPS RD 2	1.00	1.17	4:1	3.34
ROADWAY				
ONYX DR (GARNET LN TO CORAL LN)	0.60	0.90	4:1	3.00
ONYX DR (CORAL LN TO PHILIPS RD)	0.60	0.84	4:1	4.00
PHILIPS RD E	0.60	0.97	4:1	3.73
PHILIPS RD W	0.60	0.88	4:1	3.52

Know what's **below.** **Call** before you dig.

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NO.	REVISION	DATE	BY

DESIGNED BY: D NKEIRUKA / T LE, PE
ENTERED BY: D NKEIRUKA / T LE, PE
CHECKED BY: BRYCE KINNEY, PE
PROJECT ENGINEER: BRYCE KINNEY, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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WHAT TRANSPORTATION CAN BE.
12131 113TH AVENUE NE, SUITE 203
KIRKLAND, WASHINGTON 98034
(TEL) 425 821-3665
(FAX) 425 825-8434

CITY OF LAKEWOOD. WA •1996•

BRYCE M. KINNEY STATE OF WASHINGTON 54283 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: ILLUMINATION NOTES (EAST)

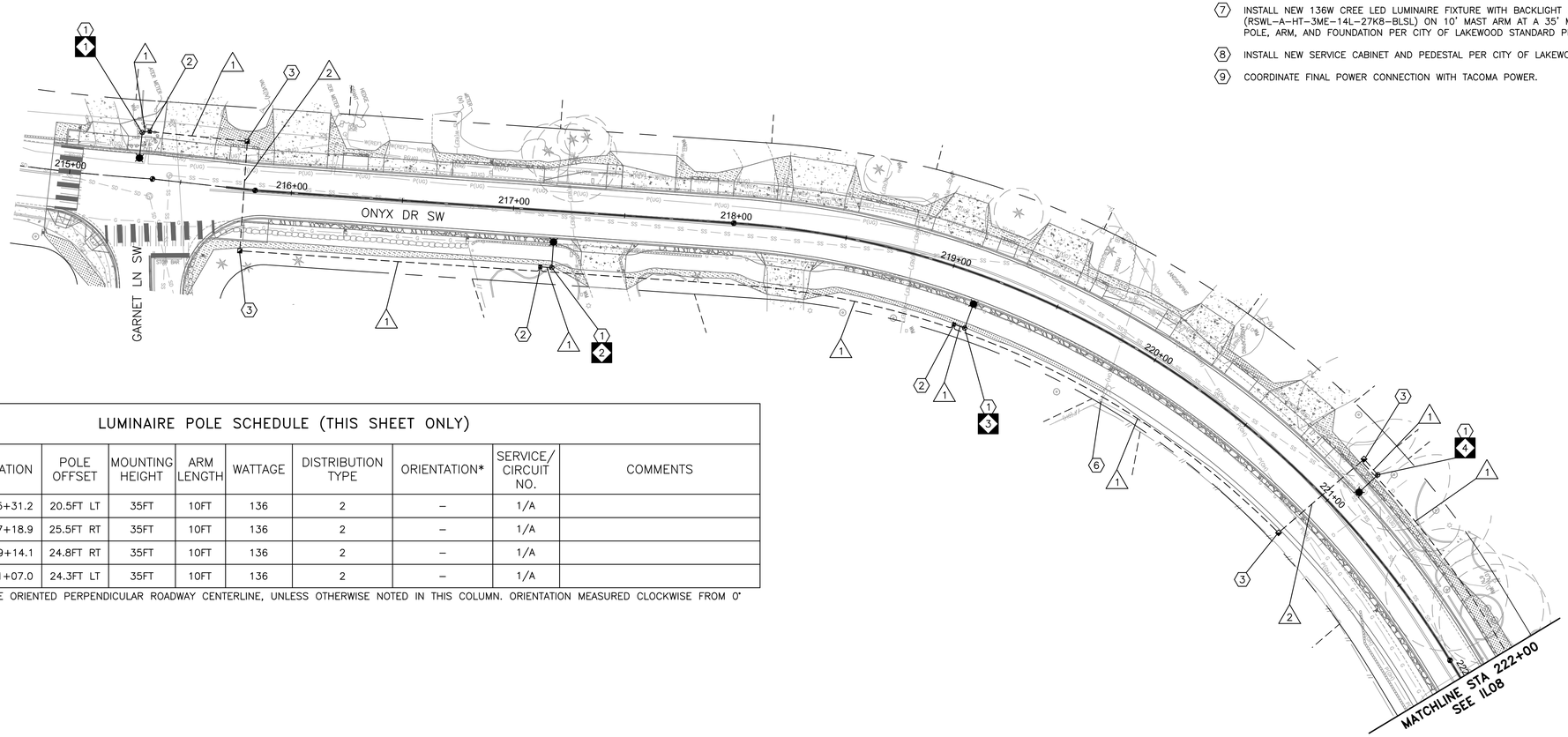
PROJECT: 302.0138
DRAWING: IL06
SHEET: 58 of 64

NOTES

1. SEE IL06 FOR GENERAL NOTES, LEGEND, AND LIGHT LEVELS.

CONSTRUCTION NOTES

1. INSTALL NEW 136W CREE LED LUMINAIRE FIXTURE WITH BACKLIGHT SHIELD AND TYPE 2 DISTRIBUTION (RSWL-A-HT-2ME-14L-27K8-BLSL) ON 10' MAST ARM AT A 35' MOUNTING HEIGHT. INSTALL ALUMINUM POLE, ARM, AND FOUNDATION PER CITY OF LAKEWOOD STANDARD PLAN IS-06.
2. INSTALL TYPE 1 JUNCTION BOX PER WSDOT STANDARD PLAN J-40.10-04.
3. INSTALL TYPE 2 JUNCTION BOX PER WSDOT STANDARD PLAN J-40.10-04.
4. REMOVE AND SALVAGE EXISTING LUMINAIRE. REPLACE WITH NEW 136W CREE LED LUMINAIRE FIXTURE WITH BACKLIGHT SHIELD AND TYPE 3 DISTRIBUTION (RSWM-A-HT-3ME-9L-27K8-BLSL) ON EXISTING MAST ARM.
5. EXISTING LUMINAIRE TO REMAIN.
6. REMOVE EXISTING LUMINAIRE AND MAST ARM FROM EXISTING TIMBER POLE.
7. INSTALL NEW 136W CREE LED LUMINAIRE FIXTURE WITH BACKLIGHT SHIELD AND TYPE 3 DISTRIBUTION (RSWL-A-HT-3ME-14L-27K8-BLSL) ON 10' MAST ARM AT A 35' MOUNTING HEIGHT. INSTALL ALUMINUM POLE, ARM, AND FOUNDATION PER CITY OF LAKEWOOD STANDARD PLAN IS-06.
8. INSTALL NEW SERVICE CABINET AND PEDESTAL PER CITY OF LAKEWOOD STANDARD PLAN IS-04.
9. COORDINATE FINAL POWER CONNECTION WITH TACOMA POWER.



LUMINAIRE POLE SCHEDULE (THIS SHEET ONLY)

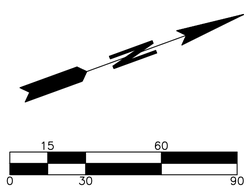
LUMINAIRE POLE NO.	STATION REFERENCE	STATION	POLE OFFSET	MOUNTING HEIGHT	ARM LENGTH	WATTAGE	DISTRIBUTION TYPE	ORIENTATION*	SERVICE/ CIRCUIT NO.	COMMENTS
1	ONYX DR	215+31.2	20.5FT LT	35FT	10FT	136	2	–	1/A	
2	ONYX DR	217+18.9	25.5FT RT	35FT	10FT	136	2	–	1/A	
3	ONYX DR	219+14.1	24.8FT RT	35FT	10FT	136	2	–	1/A	
4	ONYX DR	221+07.0	24.3FT LT	35FT	10FT	136	2	–	1/A	

* ALL LUMINAIRE FIXTURES SHALL BE ORIENTED PERPENDICULAR ROADWAY CENTERLINE, UNLESS OTHERWISE NOTED IN THIS COLUMN. ORIENTATION MEASURED CLOCKWISE FROM 0° DEGREE TRUE NORTH.

WIRING SCHEDULE (THIS SHEET ONLY)

# NO.	RACEWAY CONDUIT SIZE*	CONDUCTOR	COMMENTS
1	2" SCH(40)	2-#6	ILLUM CIRCUIT 1/A
2	2" SCH(80)	2-#6	ILLUM CIRCUIT 1/A
	2" SCH(80)	SPARE WITH PULL ROPE	

* ALL CONDUIT SHALL BE PVC AND SHALL CONTAIN A GROUND WIRE EQUAL IN SIZE TO THE LARGEST CONDUCTOR (MINIMUM NO. 6) UNLESS OTHERWISE NOTED.



Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: D NKEIRUKA / T LE, PE
ENTERED BY: D NKEIRUKA / T LE, PE
CHECKED BY: BRYCE KINNEY, PE
PROJECT ENGINEER: BRYCE KINNEY, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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CITY OF LAKEWOOD, WA 1996

BRYCE M. KINNEY STATE OF WASHINGTON 54283 REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: ILLUMINATION PLAN (EAST)

PROJECT: 302.0138
DRAWING: IL07
SHEET: 59 of 64

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NOTES

1. SEE IL06 FOR GENERAL NOTES, LEGEND, AND LIGHT LEVELS.

LUMINAIRE POLE SCHEDULE (THIS SHEET ONLY)

LUMINAIRE POLE NO.	STATION REFERENCE	STATION	POLE OFFSET	MOUNTING HEIGHT	ARM LENGTH	WATTAGE	DISTRIBUTION TYPE	ORIENTATION*	SERVICE/ CIRCUIT NO.	COMMENTS
5	ONYX DR	222+93.3	26.6FT LT	35FT	10FT	136	3	216	1/A	
6	ONYX DR	224+12.3	19.5FT LT	35FT	10FT	136	2	–	1/A	
7	ONYX DR	225+78.4	19.5FT LT	35FT	10FT	136	2	–	1/A	
8	ONYX DR	227+69.8	24.5FT LT	35FT	10FT	136	2	–	1/A	
9	ONYX DR	229+57.7	19.5FT LT	35FT	10FT	136	2	–	1/A	
10	ONYX DR	231+44.2	28.4FT LT	35FT	10FT	136	2	–	1/B	
11	ONYX DR	233+37.6	19.5FT LT	35FT	10FT	136	2	–	1/B	
12	ONYX DR	235+24.2	19.5FT LT	35FT	10FT	136	2	–	1/B	
13	ONYX DR	237+04.4	19.5FT LT	35FT	10FT	136	2	–	1/B	
14	ONYX DR	238+91.7	19.5FT LT	35FT	10FT	136	2	–	1/B	

* ALL LUMINAIRE FIXTURES SHALL BE ORIENTED PERPENDICULAR ROADWAY CENTERLINE, UNLESS OTHERWISE NOTED IN THIS COLUMN. ORIENTATION MEASURED CLOCKWISE FROM 0° DEGREE TRUE NORTH.

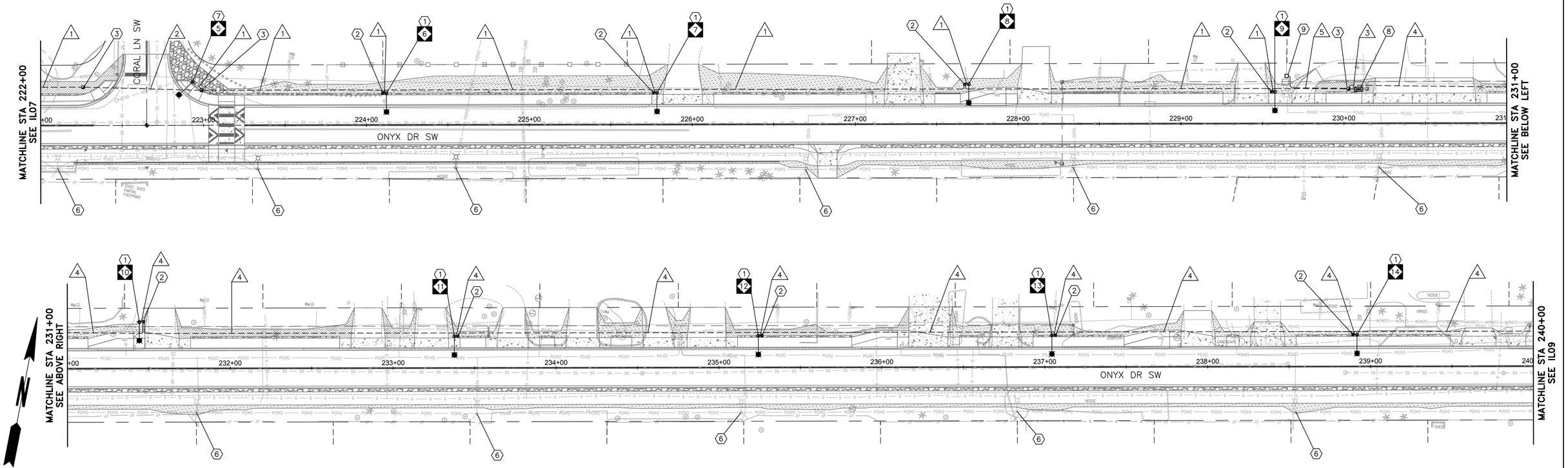
WIRING SCHEDULE (THIS SHEET ONLY)

# NO.	RACEWAY CONDUIT SIZE*	CONDUCTOR	COMMENTS
1	2" SCH(40)	2–#6	ILLUM CIRCUIT 1/A
2	2" SCH(80)	2–#6	ILLUM CIRCUIT 1/A
	2" SCH(80)		SPARE WITH PULL ROPE
3	2" SCH(40)	4–#6, **	ILLUM CIRCUITS 1/A, 1/B, SERVICE POWER
	3" SCH(40)		SPARE WITH PULL ROPE
4	2" SCH(40)	2–#6	ILLUM CIRCUIT 1/B
5	2" SCH(40)	**	SERVICE POWER

* ALL CONDUIT SHALL BE PVC AND SHALL CONTAIN A GROUND WIRE EQUAL IN SIZE TO THE LARGEST CONDUCTOR (MINIMUM NO. 6) UNLESS OTHERWISE NOTED.
** COORDINATE WITH TACOMA POWER FOR SERVICE POWER CONDUCTOR SIZE.

CONSTRUCTION NOTES

1. INSTALL NEW 136W CREE LED LUMINAIRE FIXTURE WITH BACKLIGHT SHIELD AND TYPE 2 DISTRIBUTION (RSWL–A–HT–2ME–14L–27K8–BLSL) ON 10' MAST ARM AT A 35' MOUNTING HEIGHT. INSTALL ALUMINUM POLE, ARM, AND FOUNDATION PER CITY OF LAKEWOOD STANDARD PLAN IS–06.
2. INSTALL TYPE 1 JUNCTION BOX PER WSDOT STANDARD PLAN J–40.10–04.
3. INSTALL TYPE 2 JUNCTION BOX PER WSDOT STANDARD PLAN J–40.10–04.
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8. INSTALL NEW SERVICE CABINET AND PEDESTAL PER CITY OF LAKEWOOD STANDARD PLAN IS–04.
9. COORDINATE FINAL POWER CONNECTION WITH TACOMA POWER.



Know what's **below.** **Call** before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: D NKEIRUKA / T LE, PE
ENTERED BY: D NKEIRUKA / T LE, PE
CHECKED BY: BRYCE KINNEY, PE
PROJECT ENGINEER: BRYCE KINNEY, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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(FAX) 425 825-8434

CITY OF LAKEWOOD, WA • 1996 •

BRYCE M. KINNEY — STATE OF WASHINGTON — 54283 — REGISTERED PROFESSIONAL ENGINEER — 2/11/20

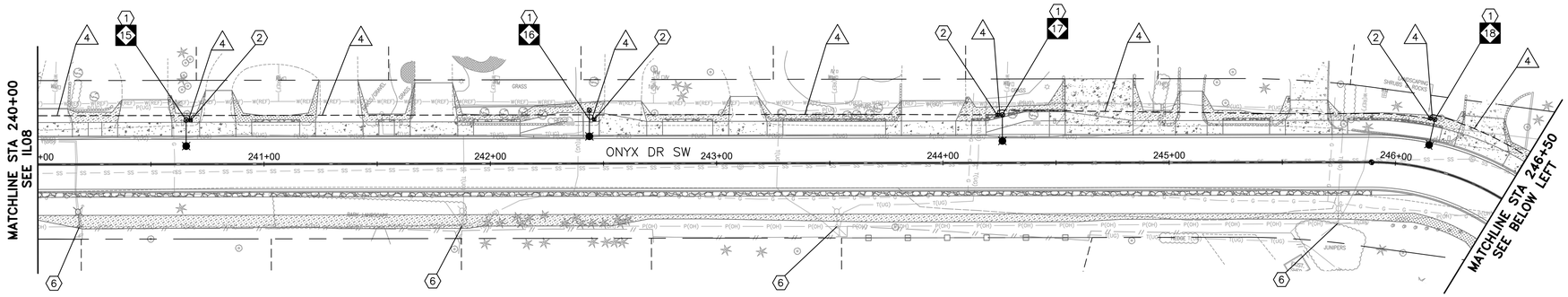
PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: ILLUMINATION PLAN (EAST)

PROJECT 302.0138
DRAWING IL08
SHEET 60 of 64

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NOTES

1. SEE IL06 FOR GENERAL NOTES, LEGEND, AND LIGHT LEVELS.



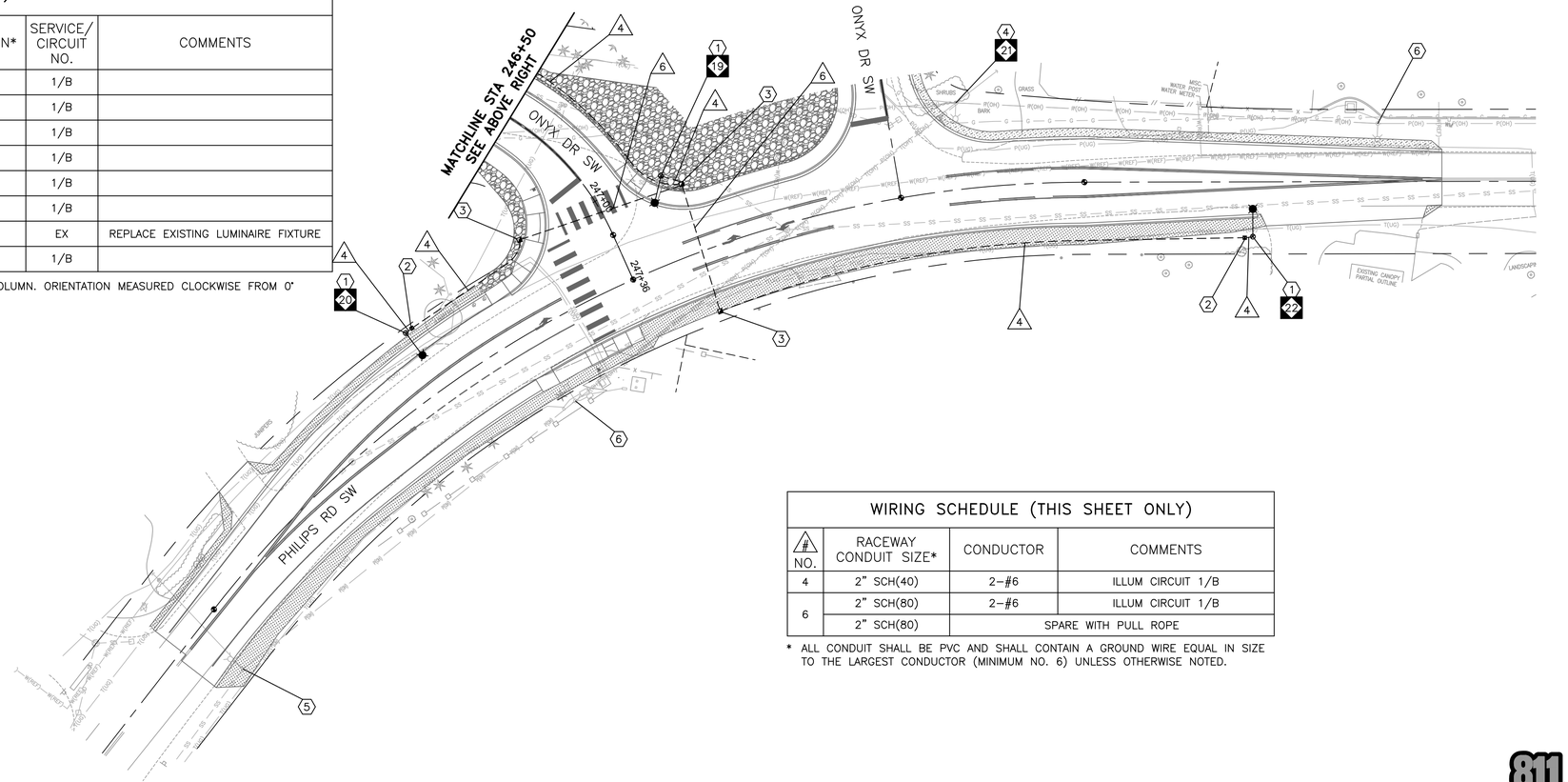
CONSTRUCTION NOTES

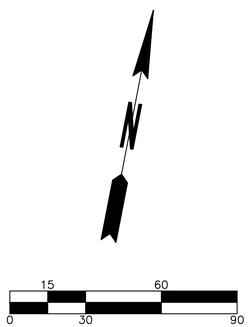
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2. INSTALL TYPE 1 JUNCTION BOX PER WSDOT STANDARD PLAN J-40.10-04.
3. INSTALL TYPE 2 JUNCTION BOX PER WSDOT STANDARD PLAN J-40.10-04.
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8. INSTALL NEW SERVICE CABINET AND PEDESTAL PER CITY OF LAKEWOOD STANDARD PLAN IS-04.
9. COORDINATE FINAL POWER CONNECTION WITH TACOMA POWER.

LUMINAIRE POLE SCHEDULE (THIS SHEET ONLY)

LUMINAIRE POLE NO.	STATION REFERENCE	STATION	POLE OFFSET	MOUNTING HEIGHT	ARM LENGTH	WATTAGE	DISTRIBUTION TYPE	ORIENTATION*	SERVICE/ CIRCUIT NO.	COMMENTS
15	ONYX DR	240+65.6	19.5FT LT	35FT	10FT	136	2	–	1/B	
16	ONYX DR	242+43.8	19.5FT LT	35FT	10FT	136	2	–	1/B	
17	ONYX DR	244+26.3	21.2FT LT	35FT	10FT	136	2	–	1/B	
18	ONYX DR	246+13.0	21.8FT LT	35FT	10FT	136	2	–	1/B	
19	ONYX DR	247+04.6	29.0FT LT	35FT	10FT	136	2	182	1/B	
20	PHILLIPS RD	302+09.3	27.9FT LT	35FT	10FT	136	2	–	1/B	
21	PHILLIPS RD	EX	EX	EX	EX	136	3	–	EX	REPLACE EXISTING LUMINAIRE FIXTURE
22	PHILLIPS RD	305+63.2	22.8FT RT	35FT	10FT	136	2	–	1/B	

* ALL LUMINAIRE FIXTURES SHALL BE ORIENTED PERPENDICULAR ROADWAY CENTERLINE, UNLESS OTHERWISE NOTED IN THIS COLUMN. ORIENTATION MEASURED CLOCKWISE FROM 0° DEGREE TRUE NORTH.





WIRING SCHEDULE (THIS SHEET ONLY)

# NO.	RACEWAY CONDUIT SIZE*	CONDUCTOR	COMMENTS
4	2" SCH(40)	2-#6	ILLUM CIRCUIT 1/B
6	2" SCH(80)	2-#6	ILLUM CIRCUIT 1/B
	2" SCH(80)	SPARE WITH PULL ROPE	

* ALL CONDUIT SHALL BE PVC AND SHALL CONTAIN A GROUND WIRE EQUAL IN SIZE TO THE LARGEST CONDUCTOR (MINIMUM NO. 6) UNLESS OTHERWISE NOTED.

811 Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: D NKEIRUKA / T LE, PE
ENTERED BY: D NKEIRUKA / T LE, PE
CHECKED BY: BRYCE KINNEY, PE
PROJECT ENGINEER: BRYCE KINNEY, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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CITY OF LAKEWOOD, WA 1996

BRYCE M. KINNEY 54283 STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: ILLUMINATION PLAN (EAST)

PROJECT: 302.0138
DRAWING: IL09
SHEET: 61 of 64

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NOTES

1. SEE SHEET IL01 FOR GENERAL NOTES AND LEGEND.

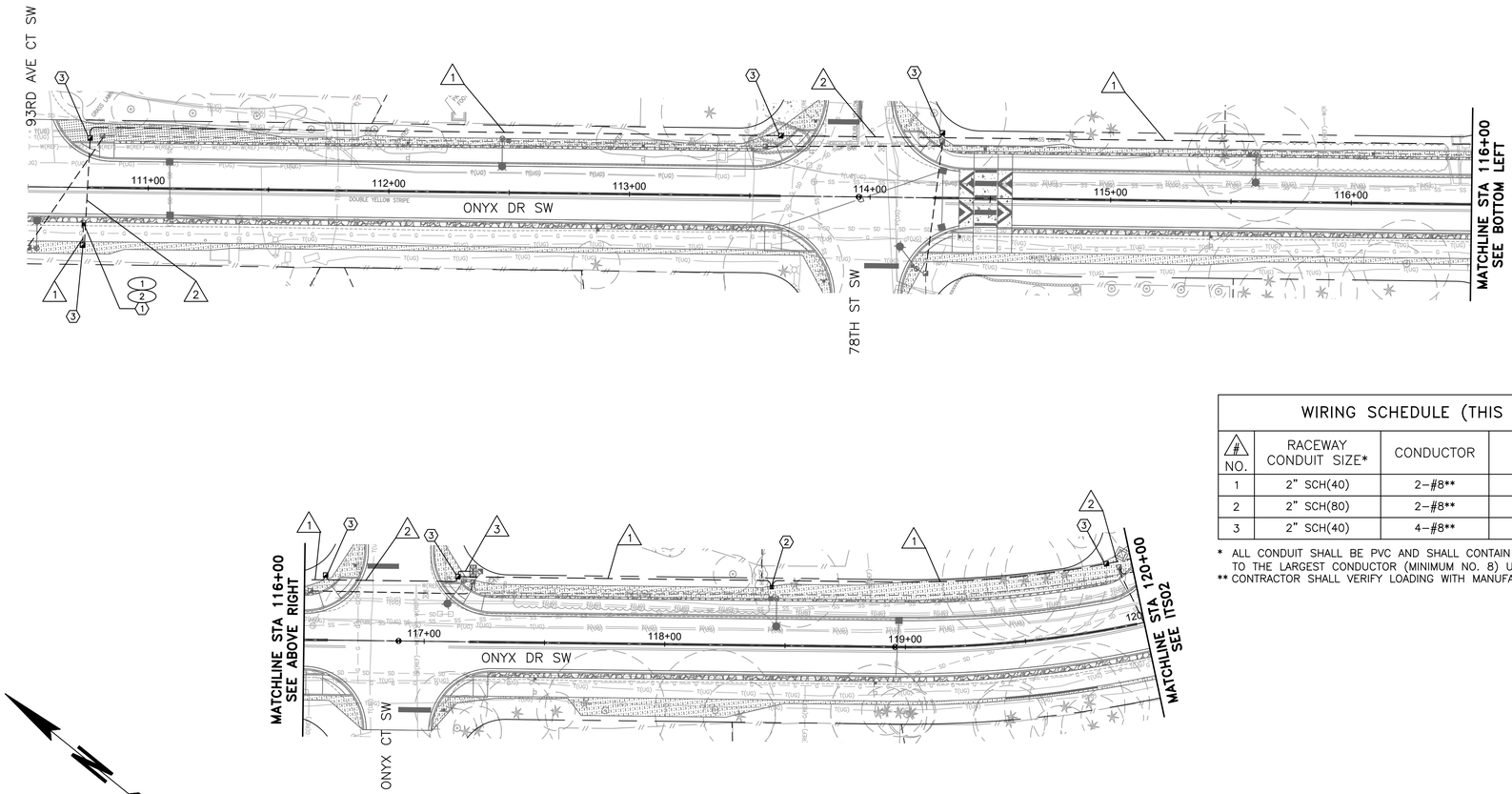
CONSTRUCTION NOTES

(1) INSTALL SIGN POST AND SIGN(S) PER SIGN SCHEDULE AND DETAIL ON THIS SHEET AND WSDOT STANDARD PLANS G-20.10-02, G-24.30-02, AND G-25.10-04. INSTALL HARD-WIRED RADAR SPEED SIGN ON POST PER MANUFACTURER'S SPECIFICATIONS.

(2) INSTALL TYPE 1 JUNCTION BOX PER CITY OF LAKEWOOD STANDARD PLAN IS-01.

(3) INSTALL TYPE 2 JUNCTION BOX PER CITY OF LAKEWOOD STANDARD PLAN IS-01.

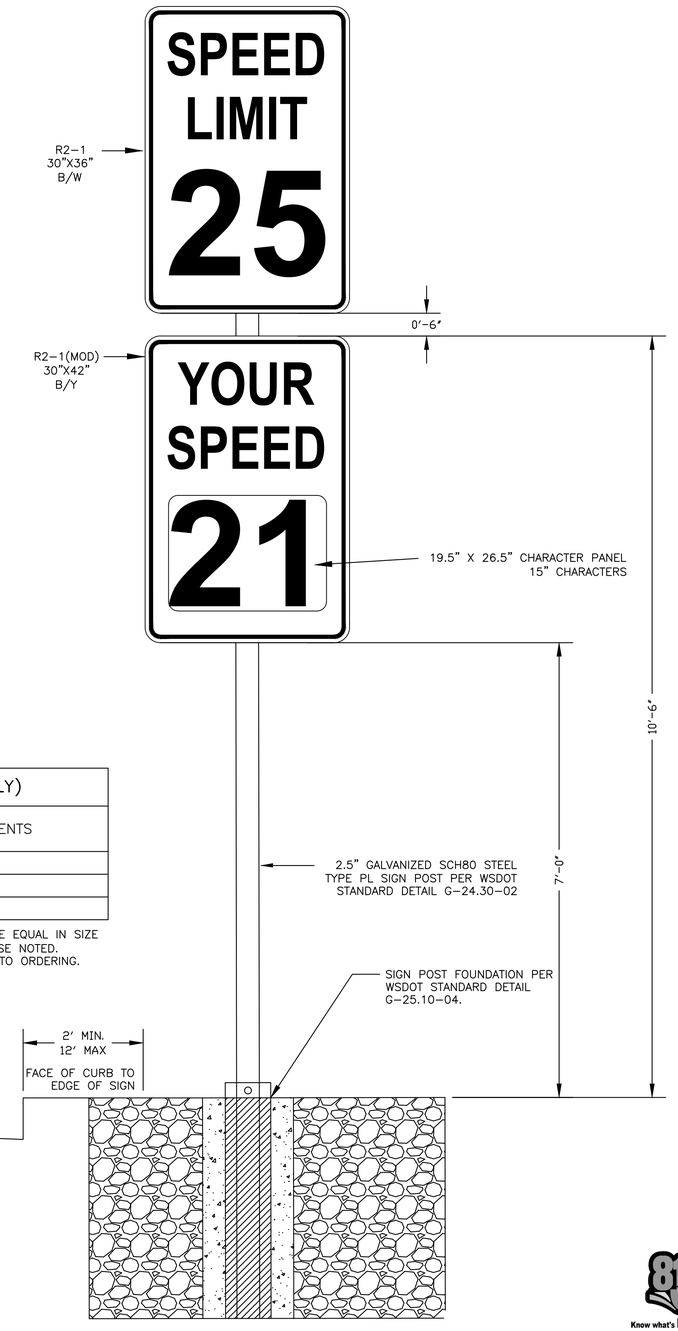
SIGN SCHEDULE (THIS SHEET ONLY)						
SIGN NO.	SIGN CODE	DESCRIPTION	DIMENSIONS	STATIONING CENTERLINE	STATION	OFFSET
(1)	R2-1	SPEED LIMIT (25 MPH)	30" X 36"	ONYX DR	110+72.7	15.3FT RT
(2)	R2-1 (MOD)	YOUR SPEED	30" X 42"			

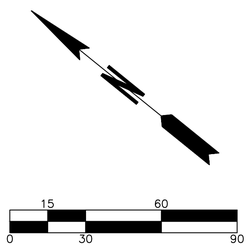


WIRING SCHEDULE (THIS SHEET ONLY)			
(#) NO.	RACEWAY CONDUIT SIZE*	CONDUCTOR	COMMENTS
1	2" SCH(40)	2-#8**	
2	2" SCH(80)	2-#8**	
3	2" SCH(40)	4-#8**	

* ALL CONDUIT SHALL BE PVC AND SHALL CONTAIN A GROUND WIRE EQUAL IN SIZE TO THE LARGEST CONDUCTOR (MINIMUM NO. 8) UNLESS OTHERWISE NOTED.
** CONTRACTOR SHALL VERIFY LOADING WITH MANUFACTURER PRIOR TO ORDERING.

SPEED RADAR FEEDBACK SIGN DETAIL





Know what's below. Call before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: D NKEIRUKA / T LE, PE
ENTERED BY: D NKEIRUKA / T LE, PE
CHECKED BY: BRYCE KINNEY, PE
PROJECT ENGINEER: BRYCE KINNEY, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

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KIRKLAND, WASHINGTON 98034
(TEL) 425 821-3665
(FAX) 425 825-8434

CITY OF LAKEWOOD, WA 1996

BRYCE M. KINNEY, STATE OF WASHINGTON, 54283, REGISTERED PROFESSIONAL ENGINEER

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: SPEED RADAR SIGN PLAN (WEST)

PROJECT: 302.0138
DRAWING: ITS01
SHEET: 62 of 64

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NOTES

1. SEE SHEET IL01 FOR GENERAL NOTES AND LEGEND.
2. SEE SHEET ITS01 FOR SPEED FEEDBACK RADAR SIGN DETAILS.

CONSTRUCTION NOTES

(1) INSTALL SIGN POST AND SIGN(S) PER SIGN SCHEDULE AND DETAIL ON THIS SHEET AND WSDOT STANDARD PLANS G-20.10-02, G-24.30-02, AND G-25.10-04. INSTALL HARD-WIRED RADAR SPEED SIGN ON POST PER MANUFACTURER'S SPECIFICATIONS.

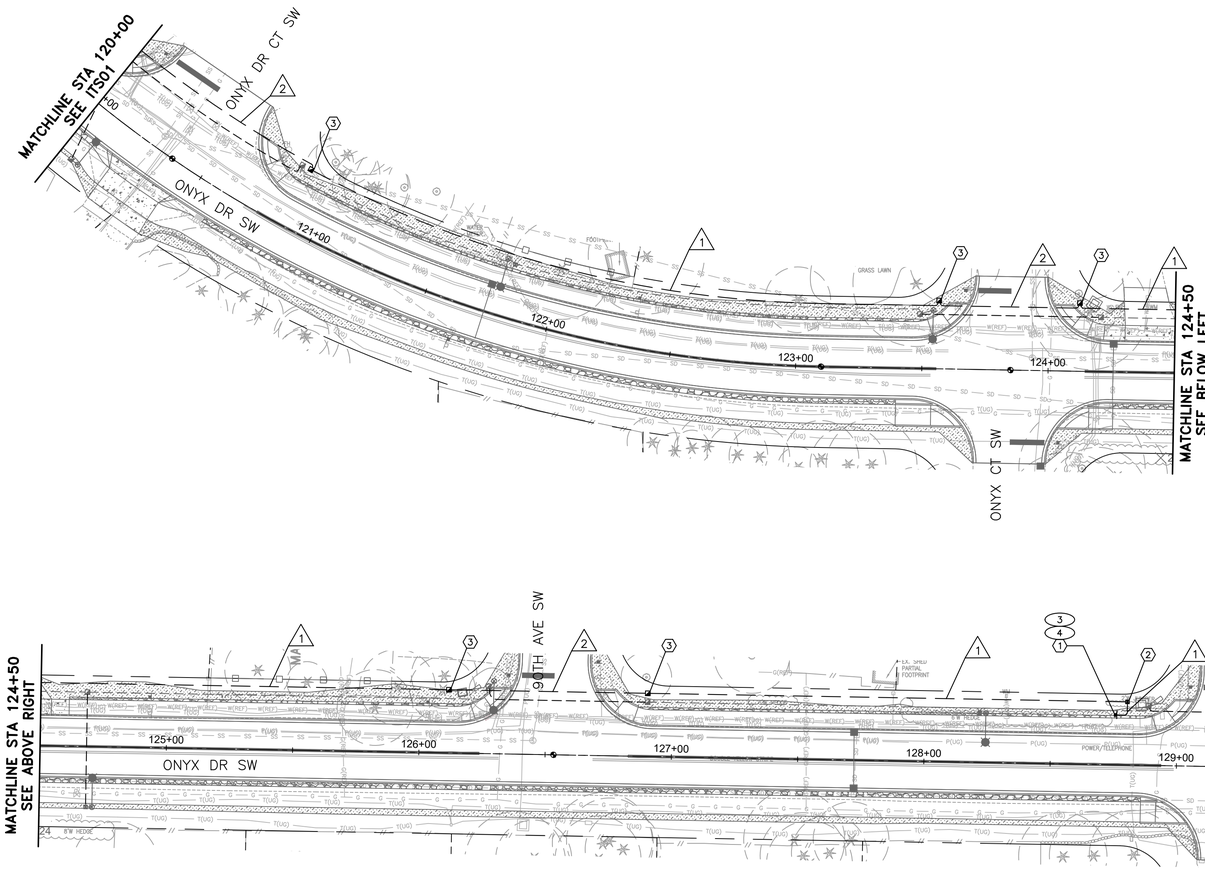
(2) INSTALL TYPE 1 JUNCTION BOX PER CITY OF LAKEWOOD STANDARD PLAN IS-01.

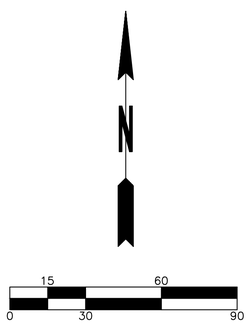
(3) INSTALL TYPE 2 JUNCTION BOX PER CITY OF LAKEWOOD STANDARD PLAN IS-01.

SIGN SCHEDULE (THIS SHEET ONLY)						
SIGN NO.	SIGN CODE	DESCRIPTION	DIMENSIONS	STATIONING CENTERLINE	STATION	OFFSET
(3)	R2-1	SPEED LIMIT (25 MPH)	30" X 36"	ONYX DR	128+76.1	19.8FT LT
(4)	R2-1 (MOD)	YOUR SPEED	30" X 42"			

WIRING SCHEDULE (THIS SHEET ONLY)			
(#) NO.	RACEWAY CONDUIT SIZE*	CONDUCTOR	COMMENTS
1	2" SCH(40)	2-#8**	
2	2" SCH(80)	2-#8**	

* ALL CONDUIT SHALL BE PVC AND SHALL CONTAIN A GROUND WIRE EQUAL IN SIZE TO THE LARGEST CONDUCTOR (MINIMUM NO. 8) UNLESS OTHERWISE NOTED.
** CONTRACTOR SHALL VERIFY LOADING WITH MANUFACTURER PRIOR TO ORDERING.





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(TEL) 425 821-3665
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CITY OF LAKEWOOD, WA 1996

BRYCE M. KINNEY STATE OF WASHINGTON 54283 REGISTERED PROFESSIONAL ENGINEER 3/11/20

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: SPEED RADAR SIGN PLAN (WEST)

PROJECT: 302.0138
DRAWING: ITS02
SHEET: 63 of 64

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SEC 28 T.20N. R.2E. WM
SEC 41 T.20N. R.2E. WM

NOTES

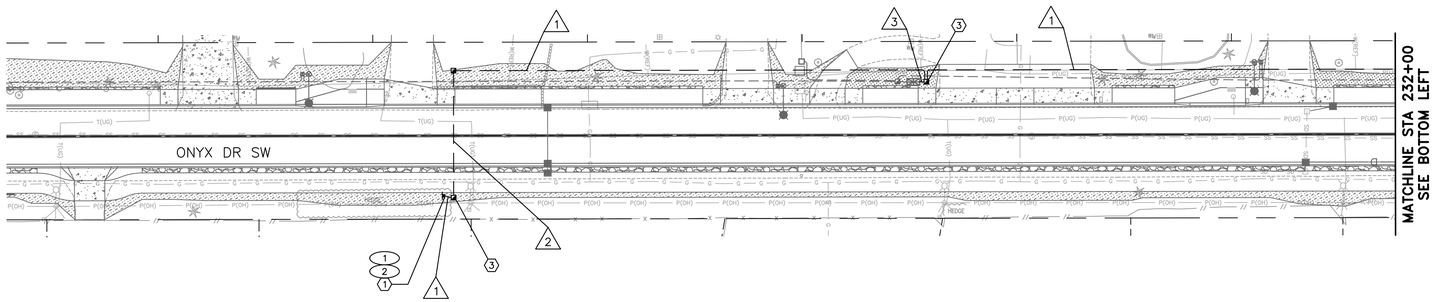
1. SEE SHEET IL01 FOR GENERAL NOTES AND LEGEND.

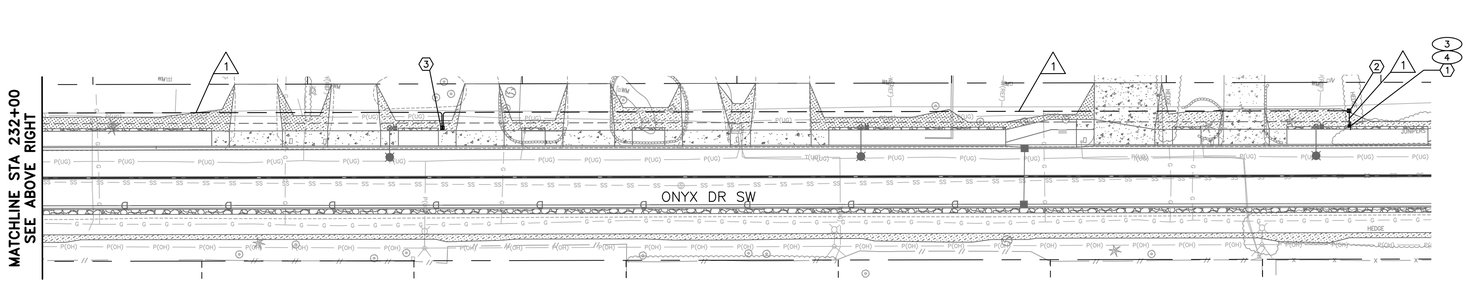
CONSTRUCTION NOTES

1. INSTALL SIGN POST AND SIGN(S) PER SIGN SCHEDULE AND DETAIL ON THIS SHEET AND WSDOT STANDARD PLANS G-20.10-02, G-24.30-02, AND G-25.10-04. INSTALL HARD-WIRED RADAR SPEED SIGN ON POST PER MANUFACTURER'S SPECIFICATIONS.
2. INSTALL TYPE 1 JUNCTION BOX PER CITY OF LAKEWOOD STANDARD PLAN IS-01.
3. INSTALL TYPE 2 JUNCTION BOX PER CITY OF LAKEWOOD STANDARD PLAN IS-01.

SIGN SCHEDULE (THIS SHEET ONLY)

SIGN NO.	SIGN CODE	DESCRIPTION	DIMENSIONS	STATIONING CENTERLINE	STATION	OFFSET
1	R2-1	SPEED LIMIT (25 MPH)	30" X 36"	ONYX DR	228+22.6	23.8FT RT
2	R2-1 (MOD)	YOUR SPEED	30" X 42"			
3	R2-1	SPEED LIMIT (25 MPH)	30" X 36"	ONYX DR	237+18.1	19.8FT LT
4	R2-1 (MOD)	YOUR SPEED	30" X 42"			

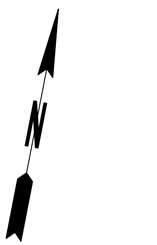


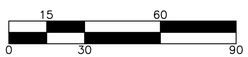


WIRING SCHEDULE (THIS SHEET ONLY)

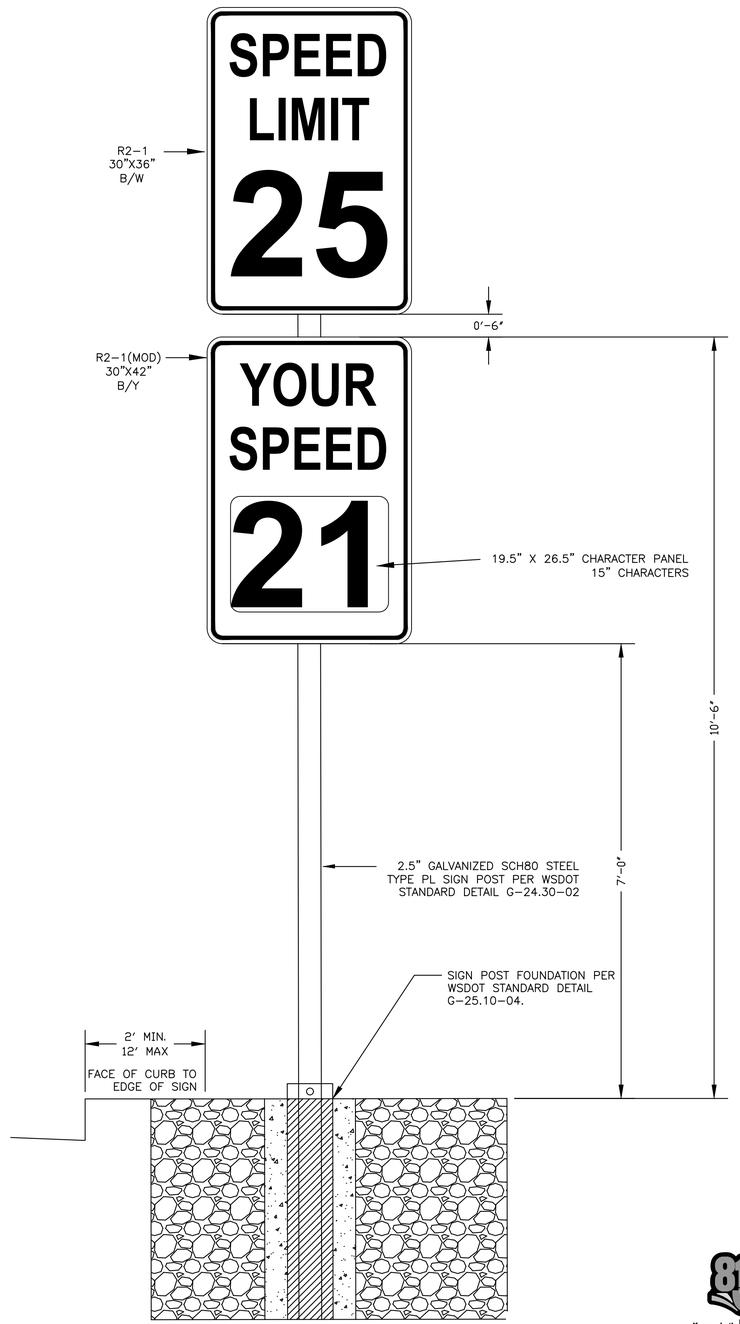
# NO.	RACEWAY CONDUIT SIZE*	CONDUCTOR	COMMENTS
1	2" SCH(40)	2-#8**	
2	2" SCH(80)	2-#8**	
3	2" SCH(40)	4-#8**	

* ALL CONDUIT SHALL BE PVC AND SHALL CONTAIN A GROUND WIRE EQUAL IN SIZE TO THE LARGEST CONDUCTOR (MINIMUM NO. 8) UNLESS OTHERWISE NOTED.
** CONTRACTOR SHALL VERIFY LOADING WITH MANUFACTURER PRIOR TO ORDERING.





SPEED RADAR FEEDBACK SIGN DETAIL



Know what's **below.** **Call** before you dig.

NO.	REVISION	DATE	BY

DESIGNED BY: D NKEIRUKA / T LE, PE
ENTERED BY: D NKEIRUKA / T LE, PE
CHECKED BY: BRYCE KINNEY, PE
PROJECT ENGINEER: BRYCE KINNEY, PE
APPROVED BY: PAUL A. BUCICH, PE
DRAWING SCALE: AS SHOWN

transpogroup
WHAT TRANSPORTATION CAN BE.
12131 113TH AVENUE NE, SUITE 203
KIRKLAND, WASHINGTON 98034
(TEL) 425 821-3665
(FAX) 425 825-8434

CITY OF LAKEWOOD, WA • 1996 •

BRYCE M. KINNEY — STATE OF WASHINGTON — 54283 — REGISTERED PROFESSIONAL ENGINEER — 3/11/20

PROJECT NAME: ONYX DRIVE ROADWAY IMPROVEMENTS
DRAWING NAME: SPEED RADAR SIGN PLAN (EAST)

PROJECT: 302.0138
DRAWING: ITS03
SHEET: 64 of 64

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