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Project:	MP 222.7 OTIC Over Turner Road		

Element: SP 511B - CLASS HP4 CONCRETE, SUPERSTRUCTURE DECK SLAB

SP 511B - CLASS HP4 CONCRETE, SUPERSTRUCTURE DECK SLAB

DECK SLAB:

DECK WIDTH=	63.583	FT
DECK THICKNESS=	8.5	IN
WB DECK LENGTH=	149.25	FT
EB DECK LENGTH=	165.00	FT
SLAB AREA=	45.038	FT^2

HAUNCH:

FLANGE WIDTH=	12	IN
FLANGE THICKNESS=	0.94	IN
HAUNCH THICKNESS=	4	IN
INT. HAUNCH AREA=	72.72	IN^2
NO. OF INT. BEAMS=	7	
EXT. HAUNCH AREA=	42	IN^2
NO. OF EXT. BEAMS=	2	

OVERHANGS:

OVERHANG WIDTH=	2.917	FT
AVG THICKNESS=	7	IN
OVERHANG AREA=	1.701	FT^2
NO. OF O-HANGS=	2	

WB TOTAL=	291	CU. YD.
EB TOTAL=	321	CU. YD.
TOTAL	612	CU. YD.

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Verified:		Date:	
Office:	Pittsburgh		
Project:	MP 222.7 OTIC Over Turner Roa		

Element: SP 511B - CLASS S CONCRETE, BARRIERS AND PARAPETS, USING TYPE I CEMENT

SP 511B - CLASS S CONCRETE, BARRIERS AND PARAPETS, USING TYPE I CEMENT

STANDARD SBR-1-13 CROSS SECTION=	588	IN^2
VOLUME OF 14'-0" TRANSITION=	1.82	CU. YD.
OTIC STD SBR-50 CROSS SECTION =	5.12	SQ. FT.

STANDARD SBR-1-13 BARRIERS:

WB DECK:
RT LENGTH = 149.25 FT
WB DECK VOLUME = 22.57 CU. YD.

EB DECK:
RT LENGTH = 165 FT
EB DECK VOLUME = 24.95 CU. YD.

EB FWD. ABUTMENT:
RT LENGTH = 44.92 FT
RT VOLUME = 6.79 CU. YD.

TRANSITION BARRIERS:

WB REAR ABUT:
RT LENGTH = 17.25 FT
RT VOLUME = 2.24 CU. YD.

WB FWD ABUT:
RT LENGTH = 21.25 FT
RT VOLUME = 2.76 CU. YD.

EB REAR ABUT:
RT LENGTH = 17.25 FT
RT VOLUME = 2.24 CU. YD.

OTIC SBR-50 (MEDIAN) BARRIERS:

WB REAR ABUT:
LT LENGTH = 40.33 FT
LT VOLUME = 7.65 CU. YD.

WB FWD ABUT:
LT LENGTH = 45.5 FT
LT VOLUME = 8.63 CU. YD.

EB REAR ABUT:
LT LENGTH = 41.5 FT
LT VOLUME = 7.87 CU. YD.

EB FWD ABUT:
LT LENGTH = 44.5 FT
LT VOLUME = 8.44 CU. YD.

WB DECK:
LT LENGTH = 149.25 FT
WB DECK VOLUME = 28.30 CU. YD.

EB DECK:
LT LENGTH = 165 FT
EB DECK VOLUME = 31.29 CU. YD.

TOTAL WB VOLUME = 72.15 CU. YD.
TOTAL EB VOLUME = 81.59 CU. YD.

TOTAL 154 CU. YD.

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Element:	SP 511B - CLASS HP4 CONCRETE, FOR PREPLACEMENT TESTING		

SP 511B - CLASS HP4 CONCRETE, FOR PREPLACEMENT TESTING

WB	2	CU. YD.
EB	2	CU. YD.
TOTAL	4	CU. YD.

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Element:	511 - CLASS QC1 CONCRETE, ABUTMENT INCLUDING FOOTING		

511 - CLASS QC1 CONCRETE, ABUTMENT INCLUDING FOOTING

WB:

CELL WALLS:

REAR ABUTMENT:

TOP OF CELL WALL ELEV	=	1034.5	
B/ CELL WALL ELEV @ ABUT	=	1028.1	
B/ CELL WALL ELEV @ GR. BEAM	=	1029.8	
MIN WALL HT	=	4.65	FT
MAX WALL HT	=	6.35	FT
CELL WALL HEIGHT, AVG	=	5.50	FT
CELL WALL LENGTH , SKEW	=	12.75	FT
CELL WALL THICKNESS	=	1.5	FT
VOLUME	=	8.00	CU. YD

FORWARD ABUTMENT:

TOP OF CELL WALL ELEV	=	1037.3	
B/ CELL WALL ELEV @ ABUT	=	1028.2	
B/ CELL WALL ELEV @ GR. BEAM	=	1033.7	
MIN WALL HT	=	3.61	FT
MAX WALL HT	=	9.11	FT
CELL WALL HEIGHT, AVG	=	6.36	FT
CELL WALL LENGTH , SKEW	=	12.75	FT
CELL WALL THICKNESS	=	1.5	FT
VOLUME	=	10.00	CU. YD
WB TOTAL	=	18.00	CU. YD

GRADE BEAMS:

REAR ABUTMENT:

LENGTH	=	36.75	FT
WIDTH	=	3.00	FT
HEIGHT	=	4.15	FT
VOLUME	=	17.00	CU. YD

FORWARD ABUTMENT:

LENGTH	=	36.75	FT
WIDTH	=	3.00	FT
HEIGHT	=	3.11	FT
VOLUME	=	13.00	CU. YD
WB TOTAL	=	30.00	CU. YD

ABUTMENT STEM:

REAR ABUTMENT:

LENGTH	=	36.75	FT
WIDTH	=	4.00	FT
HEIGHT, AVG.	=	4.85	FT
VOLUME	=	27.00	CU. YD

FWD ABUTMENT:

LENGTH	=	36.75	FT
WIDTH	=	4.50	FT
HEIGHT, AVG.	=	8.13	FT
VOLUME	=	50.00	CU. YD
WB TOTAL	=	77.00	CU. YD

BACKWALL:

REAR ABUTMENT:

LENGTH	=	36.75	FT
WIDTH	=	1.25	FT
HEIGHT, AVG.	=	1.70	FT
VOLUME	=	3.00	CU. YD

FWD ABUTMENT:

LENGTH	=	36.75	FT
WIDTH	=	1.25	FT
HEIGHT, AVG.	=	1.78	FT
VOLUME	=	4.00	CU. YD
WB TOTAL	=	7.00	CU. YD

SEISMIC PEDESTALS:

REAR ABUTMENT:

LENGTH, SKEW	=	8.82	FT
WIDTH	=	2.75	FT
HEIGHT	=	0.552	FT
VOLUME	=	0.50	CU. YD

FWD ABUTMENT:

LENGTH, SKEW	=	9.87	FT
WIDTH	=	3.25	FT
HEIGHT	=	0.552	FT
VOLUME	=	0.66	CU. YD
WB TOTAL	=	1.15	CU. YD

WB TOTAL ABUT CONCRETE:

TOTAL	=	**134**	CU. YD

511 - CLASS QC1 CONCRETE, ABUTMENT INCLUDING FOOTING (CONT'D)

EB:

CELL WALLS:

REAR ABUTMENT:

TOP OF CELL WALL ELEV	=	1035.6	
B/ CELL WALL ELEV @ ABUT	=	1028.4	
B/ CELL WALL ELEV @ GR. BEAM	=	1032.4	
MIN WALL HT	=	3.24	FT
MAX WALL HT	=	7.24	FT
CELL WALL HEIGHT, AVG	=	5.24	FT
CELL WALL LENGTH , SKEW	=	12.75	FT
CELL WALL THICKNESS	=	1.5	FT
VOLUME	=	8.00	CU. YD

FORWARD ABUTMENT:

TOP OF CELL WALL ELEV	=	1038.7	
B/ CELL WALL ELEV @ ABUT	=	1030.8	
B/ CELL WALL ELEV @ GR. BEAM	=	1036.2	
MIN WALL HT	=	2.47	FT
MAX WALL HT	=	7.87	FT
CELL WALL HEIGHT, AVG	=	5.17	FT
CELL WALL LENGTH , SKEW	=	12.75	FT
CELL WALL THICKNESS	=	1.5	FT
VOLUME	=	8.00	CU. YD

EB TOTAL	=	16.00	CU. YD

GRADE BEAMS:

REAR ABUTMENT:

LENGTH	=	36.75	FT
WIDTH	=	3.00	FT
HEIGHT	=	2.74	FT
VOLUME	=	12.00	CU. YD

FORWARD ABUTMENT:

LENGTH	=	36.75	FT
WIDTH	=	3.00	FT
HEIGHT	=	1.97	FT
VOLUME	=	9.00	CU. YD

EB TOTAL	=	21.00	CU. YD

ABUTMENT STEM:

REAR ABUTMENT:

LENGTH	=	36.75	FT
WIDTH	=	4.00	FT
HEIGHT, AVG.	=	5.94	FT
VOLUME	=	33.00	CU. YD

FWD ABUTMENT:

LENGTH	=	36.75	FT
WIDTH	=	4.50	FT
HEIGHT, AVG.	=	6.81	FT
VOLUME	=	42.00	CU. YD

EB TOTAL	=	75.00	CU. YD

BACKWALL:

REAR ABUTMENT:

LENGTH	=	36.75	FT
WIDTH	=	1.25	FT
HEIGHT, AVG.	=	2.80	FT
VOLUME	=	5.00	CU. YD

FWD ABUTMENT:

LENGTH	=	36.75	FT
WIDTH	=	1.25	FT
HEIGHT, AVG.	=	2.86	FT
VOLUME	=	5.00	CU. YD

EB TOTAL	=	10.00	CU. YD

SEISMIC PEDESTALS:

REAR ABUTMENT:

LENGTH, SKEW	=	8.82	FT
WIDTH	=	2.75	FT
HEIGHT	=	0.552	FT
VOLUME	=	0.50	CU. YD

FWD ABUTMENT:

LENGTH, SKEW	=	9.87	FT
WIDTH	=	3.25	FT
HEIGHT	=	0.552	FT
VOLUME	=	0.66	CU. YD

EB TOTAL	=	1.15	CU. YD

EB TOTAL ABUT CONCRETE:

TOTAL	=	**124**	CU. YD

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Element:	SP511B - CLASS HP4 CONCRETE, ABUTMENT SLABS		

SP511B - CLASS HP4 CONCRETE, ABUTMENT SLABS

WB:

REAR ABUTMENT AREA	=	1095	SQ. FT
FWD. ABUTMENT AREA	=	1345	SQ. FT
SLAB THICKNESS	=	0.83	FT
WB VOLUME	=	76	CU. YD

EB:

REAR ABUTMENT AREA	=	1095	SQ. FT
FWD. ABUTMENT AREA	=	1345	SQ. FT
SLAB THICKNESS	=	0.83	FT
EB VOLUME	=	76	CU. YD

TOTAL = 152 CU. YD

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Element:	511 - CLASS QC1 CONCRETE, PIERS INCLUDING FOOTING		

511 - CLASS QC1 CONCRETE, PIERS INCLUDING FOOTING

EB&WB:

PIER 1&2 FOOTING:

LENGTH	=	9.0	FT
WIDTH	=	9.0	FT
HEIGHT	=	2.5	FT
NUMBER OF FOOTINGS	=	4	
VOLUME	=	60	CU. YD

COLUMNS:

PIER 1:

LENGTH	=	3.0	FT
WIDTH	=	3.0	FT
BOT OF CAP EL	=	1028.03	
TOP OF FOOTING EL	=	1016.72	
HEIGHT	=	11.31	FT
NUMBER OF COLUMNS	=	4	EACH
VOLUME		15.00	CU. YD

PIER 2:

LENGTH	=	3.0	FT
WIDTH	=	3.0	FT
BOT OF CAP EL	=	1029.07	
TOP OF FOOTING EL	=	1016.69	
HEIGHT	=	12.38	FT
NUMBER OF COLUMNS	=	4	EACH
VOLUME	=	16.00	CU. YD

PIER 1&2 CAP:

PIER 1:

LENGTH	=	60.0	FT
WIDTH	=	3.0	FT
AVG. TOP OF CAP EL	=	1032.67	
BOT OF CAP EL	=	1028.03	
AVG. HEIGHT		4.64	FT
VOLUME		31.00	CU. YD

PIER 2:

LENGTH	=	60.0	FT
WIDTH	=	3.0	FT
AVG. TOP OF CAP EL	=	1033.69	
BOT OF CAP EL	=	1029.07	
AVG. HEIGHT	=	4.62	FT
VOLUME	=	31.00	CU. YD

TOTAL PIER CONCRETE:

TOTAL = **153** CU. YD