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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=	170.52	FT
EB DECK LENGTH=	176.23	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=	332	CU. YD.
EB TOTAL=	343	CU. YD.
TOTAL	675	CU. YD.

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Verified:		Date:	
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Project:	MP 222.8 OTIC Over Kirk Road		

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	=	170.52	FT
WB DECK VOLUME =		25.79	CU. YD.

EB DECK:

RT LENGTH	=	176.23	FT
EB DECK VOLUME =		26.65	CU. YD.

EB REAR ABUTMENT:

RT LENGTH	=	33.89	FT
RT VOLUME	=	5.13	CU. YD.

TRANSITION BARRIERS:

WB REAR ABUT:

RT LENGTH	=	14.46	FT
RT VOLUME	=	1.88	CU. YD.

WB FWD ABUT:

RT LENGTH	=	16.73	FT
RT VOLUME	=	2.17	CU. YD.

EB FWD ABUT:

RT LENGTH	=	16.73	FT
RT VOLUME	=	2.17	CU. YD.

OTIC SBR-50 (MEDIAN) BARRIERS:

WB REAR ABUT:

LT LENGTH	=	34.23	FT
LT VOLUME	=	6.49	CU. YD.

WB FWD ABUT:

LT LENGTH	=	35.81	FT
LT VOLUME	=	6.79	CU. YD.

EB REAR ABUT:

LT LENGTH	=	33.54	FT
LT VOLUME	=	6.36	CU. YD.

EB FWD ABUT:

LT LENGTH	=	36.5	FT
LT VOLUME	=	6.92	CU. YD.

WB DECK:

LT LENGTH	=	170.52	FT
WB DECK VOLUME =		32.34	CU. YD.

EB DECK:

LT LENGTH	=	176.23	FT
EB DECK VOLUME =		33.42	CU. YD.

TOTAL WB VOLUME =	75.46	CU. YD.
TOTAL EB VOLUME =	80.65	CU. YD.
TOTAL	157	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	=	1042.1	
B/ CELL WALL ELEV @ ABUT	=	1034.8	
B/ CELL WALL ELEV @ GR. BEAM	=	1039.0	
MIN WALL HT	=	3.05	FT
MAX WALL HT	=	7.25	FT
CELL WALL HEIGHT, AVG	=	5.15	FT
CELL WALL LENGTH , SKEW	=	10.68	FT
CELL WALL THICKNESS	=	1.5	FT
VOLUME	=	6.11	CU. YD

FORWARD ABUTMENT:

TOP OF CELL WALL ELEV	=	1044.1	
B/ CELL WALL ELEV @ ABUT	=	1036.3	
B/ CELL WALL ELEV @ GR. BEAM	=	1041.5	
MIN WALL HT	=	2.56	FT
MAX WALL HT	=	7.76	FT
CELL WALL HEIGHT, AVG	=	5.16	FT
CELL WALL LENGTH , SKEW	=	12.95	FT
CELL WALL THICKNESS	=	1.5	FT
VOLUME	=	7.42	CU. YD
WB TOTAL	=	13.54	CU. YD

GRADE BEAMS:

REAR ABUTMENT:

LENGTH	=	30.11	FT
WIDTH	=	3.00	FT
HEIGHT	=	2.55	FT
VOLUME	=	8.53	CU. YD

FORWARD ABUTMENT:

LENGTH	=	30.11	FT
WIDTH	=	3.00	FT
HEIGHT	=	2.06	FT
VOLUME	=	6.89	CU. YD
WB TOTAL	=	15.42	CU. YD

ABUTMENT STEM:

REAR ABUTMENT:

LENGTH	=	30.11	FT
WIDTH	=	4.00	FT
HEIGHT, AVG.	=	5.98	FT
VOLUME	=	26.67	CU. YD

FWD ABUTMENT:

LENGTH	=	30.11	FT
WIDTH	=	4.50	FT
HEIGHT, AVG.	=	6.78	FT
VOLUME	=	34.02	CU. YD
WB TOTAL	=	60.70	CU. YD

BACKWALL:

REAR ABUTMENT:

LENGTH	=	30.11	FT
WIDTH	=	1.25	FT
HEIGHT, AVG.	=	2.87	FT
VOLUME	=	4.00	CU. YD

FWD ABUTMENT:

LENGTH	=	30.11	FT
WIDTH	=	1.25	FT
HEIGHT, AVG.	=	2.94	FT
VOLUME	=	4.10	CU. YD
WB TOTAL	=	8.10	CU. YD

SEISMIC PEDESTALS:

REAR ABUTMENT:

LENGTH, SKEW	=	7.23	FT
WIDTH	=	2.75	FT
HEIGHT	=	0.552	FT
VOLUME	=	0.41	CU. YD

FWD ABUTMENT:

LENGTH, SKEW	=	8.10	FT
WIDTH	=	3.25	FT
HEIGHT	=	0.552	FT
VOLUME	=	0.54	CU. YD
WB TOTAL	=	0.94	CU. YD

WB TOTAL ABUT CONCRETE:

TOTAL	=	**99**	CU. YD

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

EB:

CELL WALLS:

REAR ABUTMENT:

TOP OF CELL WALL ELEV	=	1042.2	
B/ CELL WALL ELEV @ ABUT	=	1034.3	
B/ CELL WALL ELEV @ GR. BEAM	=	1038.5	
MIN WALL HT	=	3.66	FT
MAX WALL HT	=	7.86	FT
CELL WALL HEIGHT, AVG	=	5.76	FT
CELL WALL LENGTH , SKEW	=	10.68	FT
CELL WALL THICKNESS	=	1.5	FT
VOLUME	=	6.84	CU. YD

FORWARD ABUTMENT:

TOP OF CELL WALL ELEV	=	1044.4	
B/ CELL WALL ELEV @ ABUT	=	1036.0	
B/ CELL WALL ELEV @ GR. BEAM	=	1041.2	
MIN WALL HT	=	3.24	FT
MAX WALL HT	=	8.44	FT
CELL WALL HEIGHT, AVG	=	5.84	FT
CELL WALL LENGTH , SKEW	=	12.95	FT
CELL WALL THICKNESS	=	1.5	FT
VOLUME	=	8.40	CU. YD

EB TOTAL	=	15.24	CU. YD

GRADE BEAMS:

REAR ABUTMENT:

LENGTH	=	30.11	FT
WIDTH	=	3.00	FT
HEIGHT	=	3.16	FT
VOLUME	=	10.57	CU. YD

FORWARD ABUTMENT:

LENGTH	=	30.11	FT
WIDTH	=	3.00	FT
HEIGHT	=	2.74	FT
VOLUME	=	9.17	CU. YD

EB TOTAL	=	19.74	CU. YD

ABUTMENT STEM:

REAR ABUTMENT:

LENGTH	=	30.11	FT
WIDTH	=	4.00	FT
HEIGHT, AVG.	=	6.29	FT
VOLUME	=	28.06	CU. YD

FWD ABUTMENT:

LENGTH	=	30.11	FT
WIDTH	=	4.50	FT
HEIGHT, AVG.	=	7.13	FT
VOLUME	=	35.78	CU. YD

EB TOTAL	=	63.84	CU. YD

BACKWALL:

REAR ABUTMENT:

LENGTH	=	30.11	FT
WIDTH	=	1.25	FT
HEIGHT, AVG.	=	2.82	FT
VOLUME	=	3.93	CU. YD

FWD ABUTMENT:

LENGTH	=	30.11	FT
WIDTH	=	1.25	FT
HEIGHT, AVG.	=	2.91	FT
VOLUME	=	4.06	CU. YD

EB TOTAL	=	7.99	CU. YD

SEISMIC PEDESTALS:

REAR ABUTMENT:

LENGTH, SKEW	=	7.23	FT
WIDTH	=	2.75	FT
HEIGHT	=	0.552	FT
VOLUME	=	0.41	CU. YD

FWD ABUTMENT:

LENGTH, SKEW	=	8.10	FT
WIDTH	=	3.25	FT
HEIGHT	=	0.552	FT
VOLUME	=	0.54	CU. YD

EB TOTAL	=	0.94	CU. YD

EB TOTAL ABUT CONCRETE:

TOTAL	=	**108**	CU. YD

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Element:	SP511B - CLASS HP4 CONCRETE, ABUTMENT SLABS		

SP511B - CLASS HP4 CONCRETE, ABUTMENT SLABS

WB:

REAR ABUTMENT AREA	=	920.74	SQ. FT
FWD. ABUTMENT AREA	=	1065.03	SQ. FT
SLAB THICKNESS	=	0.83	FT
WB VOLUME	=	62	CU. YD

EB:

REAR ABUTMENT AREA	=	920.66	SQ. FT
FWD. ABUTMENT AREA	=	1064.95	SQ. FT
SLAB THICKNESS	=	0.83	FT
EB VOLUME	=	62	CU. YD

TOTAL = 124 CU. YD

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Element:	511 - CLASS QC1 CONCRETE, PIERS INCLUDING FOOTING		

511 - CLASS QC1 CONCRETE, PIERS INCLUDING FOOTING

PIER 1&2 FOOTING:

LENGTH	=	9.0	FT
WIDTH	=	7.5	FT
HEIGHT	=	2.5	FT
NUMBER OF FOOTINGS	=	3.0	
VOLUME	=	37.5	CU. YD

PIERS 1&2 COLUMNS:

PIER 1:

LENGTH	=	3.0	FT
WIDTH	=	3.0	FT
BOT OF CAP EL	=	1035.27	
TOP OF FOOTING EL	=	1017.8	
HEIGHT	=	17.47	FT
NUMBER OF COLUMNS	=	3.00	EACH
VOLUME		16.50	CU. YD

PIER 2:

LENGTH	=	3.0	FT
WIDTH	=	3.0	FT
BOT OF CAP EL	=	1035.97	
TOP OF FOOTING EL	=	1019.1	
HEIGHT	=	16.87	FT
NUMBER OF COLUMNS	=	3.00	EACH
VOLUME	=	15.93	CU. YD

PIER 1&2 CAP:

PIER 1:

LENGTH	=	50.0	FT
WIDTH	=	3.0	FT
AVG. TOP OF CAP EL	=	1039.62	FT
BOT OF CAP EL	=	1035.27	
AVG. HEIGHT	=	4.35	FT
VOLUME	=	24.17	CU. YD

PIER 2:

LENGTH	=	50.0	FT
WIDTH	=	3.0	FT
AVG. TOP OF CAP EL	=	1040.32	FT
BOT OF CAP EL	=	1035.97	
AVG. HEIGHT	=	4.35	FT
VOLUME	=	24.17	CU. YD

TOTAL PIER CONCRETE:

TOTAL	=	**119**	CU. YD