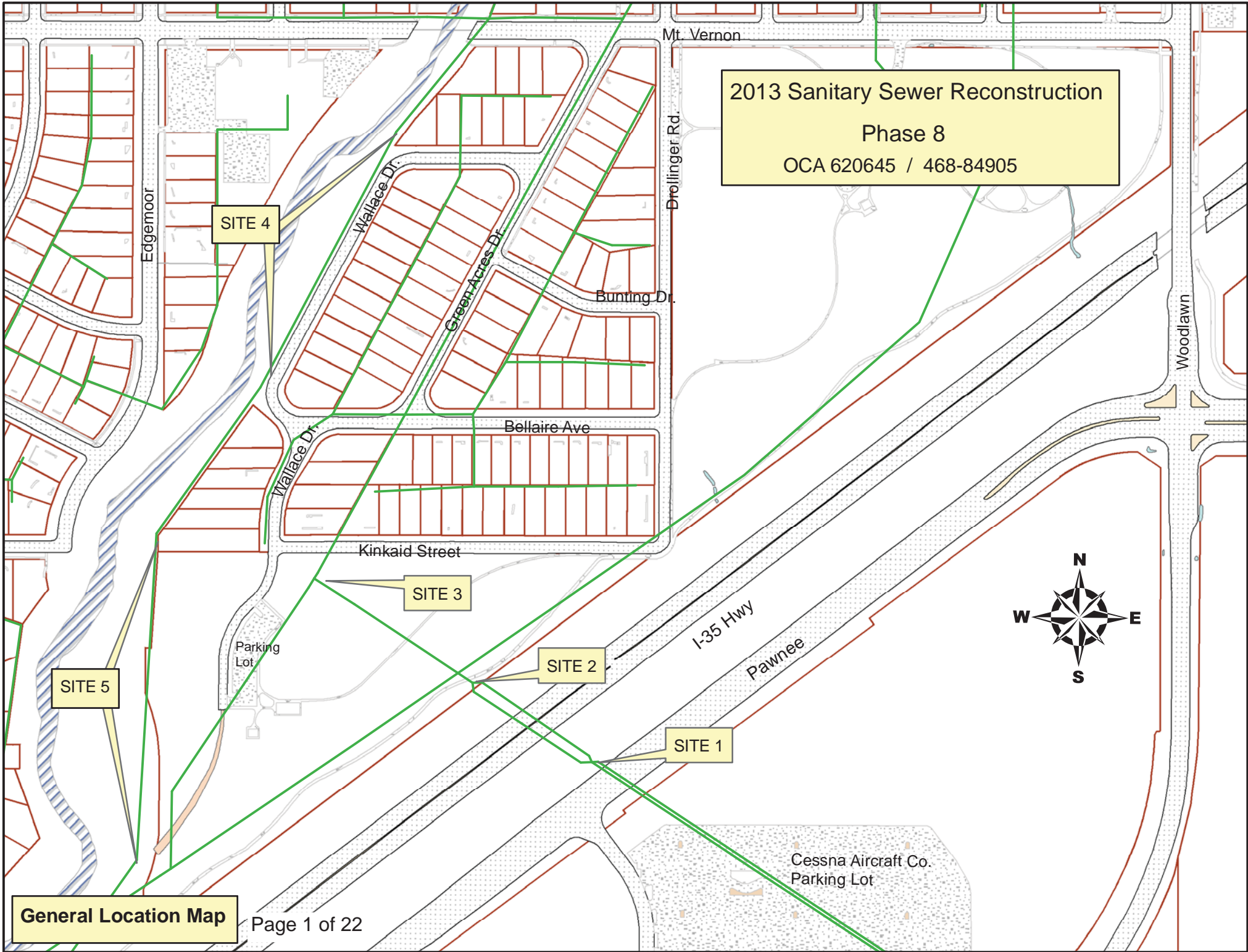


2013 Sanitary Sewer Reconstruction  
Phase 8  
OCA 620645 / 468-84905



## GENERAL NOTES

### Approved manhole lining systems:

Raven 405

Sauereisen 210S

Spectrashield

Warren Environmental S301

Zebtron

All lining materials shall be applied per manufacturer's specifications and recommended thickness for brick or precast manholes. Cleaning, filling of voids or other preparations to the manhole walls shall be included in the bid item for the lining.

### Rehabilitate Manhole (precast):

Apply an approved lining system. This 4' diameter concrete manhole was replaced by Sewer Maintenance in August, 2013.

### Rehabilitate Manhole (brick):

Apply an approved lining system. These manholes are 4' diameter and brick all the way down to the main.

### Provide Internal Inspection of Manhole Box:

These manholes have a 4' diameter brick stack sitting on a lined concrete box. The pipe diameter is 42 inches. The inspection shall include:

- a) Size of box and type of liner on the box
- b) Video inspection of the condition of the box and the area where the box meets the brick stack
- c) Structural inspection and report of any failed liner or deterioration of the box
- d) Determination and recommendation of any repairs that need to be made, if any.

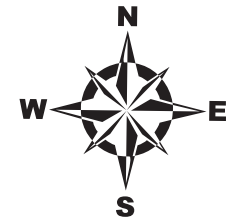
**IF ADDITIONAL WORK NEEDS TO BE DONE TO THE BOX AREA** and it is determined that it is not practical to install the lining system on the brick walls and seal it to the box liner, then the City reserves the option to eliminate the rehabilitation of the brick stacks from this project.

### Manhole Rehabilitation Liner (brick stack above box):

Apply an approved lining system on the brick portion of the manholes. Use Sewer Guard or other equivalent product to seal the new lining material to the lining on the box. The vertical height of the brick stacks is estimated and taken from old surface inspection records. Lining shall be bid by the linear foot and measured vertically. As noted above, this work may be eliminated from the project if it is determined that the box portion of the manhole needs repairs.

Seeding is allowed.

Bypass pumping shall be subsidiary to the project.



Site 2

MH 5845-061  
Remove Manhole  
Construct Standard MH (4') (lined)  
Approx MH depth = 6.9 ft

MH 5845-063  
Remove Manhole  
Construct Standard MH (4') (lined)  
Approx MH depth = 5.9 ft

MH 5845-052  
Remove Manhole  
Construct Standard MH (4') (lined)  
Approx MH depth = 8.1 ft

MH 5845-062  
Remove Manhole  
Construct Standard MH (5') (lined)  
Approx MH depth = 6.1 ft

I-35 Hwy

Pawnee

Cessna Aircraft Co.  
Parking Lot

Cessna Credit Union

**SITE 1**

Site 3

Parking Lot

Sidewalk

364' 18" PVC

MH 5845-050  
Remove Manhole  
Construct Standard MH (4') (lined)  
Approx MH depth = 9.4 ft

MH 5845-060  
Remove Manhole  
Construct Standard MH (4') (lined)  
Approx MH depth = 9.7 ft

Page 1 of 21

Sidewalk

24' 18" PVC

24' 18" P

333' 12" VCP

330' 12" VCP

MH 5845-051  
Rehabilitate Manhole (precast)  
Approx MH depth = 6.4 ft

I-35 Hwy

**SITE 2**

Page 4 of 22



Wallace Dr.

Kinkaid Street

MH 5845-036  
Approx MH depth = 21.0 ft

MH 5845-026  
Replace Manhole Frame & Cover  
Rehabilitate Manhole (brick)  
Approx MH depth = 21.4 ft

MH 5845-049  
Remove Manhole  
Construct Standard MH (4') (lined)  
Approx MH depth = 7.5 ft

MH 5845-025  
Replace Manhole Frame & Cover  
Rehabilitate Manhole (brick)  
Approx MH depth = 20.8 ft

630' 24" VCP

464' 24" VCP

123' 18" PVC

364' 18" PVC

16'

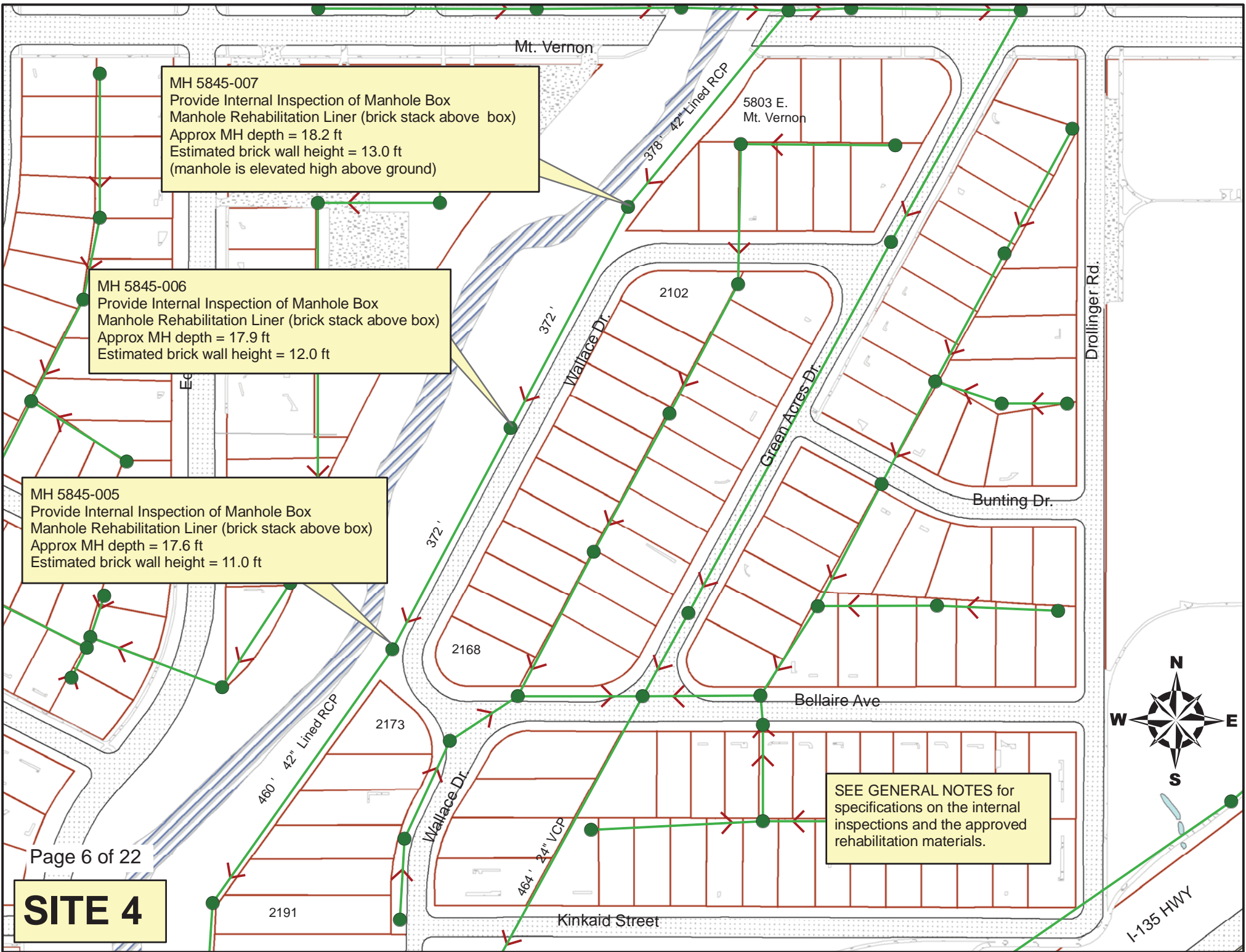
28'

Parking Lot

Sidewalk



**SITE 3**

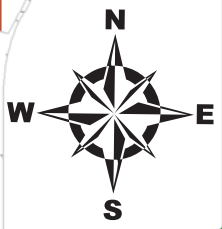


MH 5845-007  
 Provide Internal Inspection of Manhole Box  
 Manhole Rehabilitation Liner (brick stack above box)  
 Approx MH depth = 18.2 ft  
 Estimated brick wall height = 13.0 ft  
 (manhole is elevated high above ground)

MH 5845-006  
 Provide Internal Inspection of Manhole Box  
 Manhole Rehabilitation Liner (brick stack above box)  
 Approx MH depth = 17.9 ft  
 Estimated brick wall height = 12.0 ft

MH 5845-005  
 Provide Internal Inspection of Manhole Box  
 Manhole Rehabilitation Liner (brick stack above box)  
 Approx MH depth = 17.6 ft  
 Estimated brick wall height = 11.0 ft

SEE GENERAL NOTES for specifications on the internal inspections and the approved rehabilitation materials.



Mt. Vernon  
 5803 E. Mt. Vernon  
 2102  
 2168  
 2173  
 2191  
 Wallace Dr.  
 Green Acres Dr.  
 Bunting Dr.  
 Bellaire Ave  
 Kinkaid Street  
 Drollinger Rd.  
 I-135 HWY  
 378' 42" Lined RCP  
 372'  
 372'  
 460' 42" Lined RCP  
 464' 24" VCP

MH 5845-004  
Provide Internal Inspection of Manhole Box  
Manhole Rehabilitation Liner (brick stack above box)  
Approx MH depth = 15.6 ft  
Estimated brick wall height = 11.0 ft

MH 5845-003  
Replace MH Frame & Cover  
Provide Internal Inspection of Manhole Box  
Manhole Rehabilitation Liner (brick stack above box)  
Approx MH depth = 16.0 ft  
Estimated brick wall height = 11.0 ft

MH 5845-002  
Replace MH Frame & Cover  
Provide Internal Inspection of Manhole Box  
MH Rehabilitation Liner (brick stack above box)  
Approx MH depth = 16.4 ft  
Estimated brick wall height = 11.0 ft

MH 5845-024  
Rehabilitate Manhole (brick)  
Approx MH depth = 21.7 ft

MH 5845-001  
Provide Internal Inspection of Manhole Box  
Mnhole Rehabilitation Liner (brick stack above box)  
Approx MH depth = 13.6 ft  
Estimated brick wall height = 10.0 ft

SEE GENERAL NOTES for specifications on the internal inspections and the approved rehabilitation materials.

Site 3

Site 2

Site 1

Page 7 of 22  
**SITE 5**

