TOWN OF HILLSBOROUGH

As-Built Digital Submission Requirements

Submit electronic drawings and data files as described further on CD or DVD computer media, subject to the following requirements:

- Summary information file.
- CAD file(s) that include all as-built structures within the project.
- PDF files of each as-built drawing submitted for review.
- Data files for water, sanitary sewer, and stormwater infrastructure.

The CD (or DVD) shall have a permanent typewritten label (handwritten labels will not be accepted due the issues regarding legibility) that contains the project name, name of the firm that prepared the data, and date when the CD (or DVD) was prepared.

Summary Information File
The summary information file is to be an ASCII file that contains the following items:

- Project name.
- Name of the firm that prepared the data.
- Date the CD (or DVD) was prepared.
- Specification of two or more survey control monuments established and/or used for the project.

  The preferred horizontal coordinate system for the digitally submitted data as described below shall be North Carolina State Plane (NAD83), U.S. Survey Feet. The preferred vertical coordinate system for the digitally submitted data as described below shall be North American Vertical Datum, 1988 (NAVD 1988), U.S. Survey Feet. This specification should include the following information for each survey control point:

  - Easting – East coordinate value (+/- 0.01').
  - Northing – North coordinate value (+/- 0.01').
  - Elevation – Elevation (+/- 0.01').
  - Description – A brief description of the control monument (including what type of monument it is, such as USGS, NCGS, LEC, WKD, or monument located for the project).
  - A statement that indicates the horizontal and vertical datum of the control monuments.

CAD Files
Submit one or more AutoCad/MicroStation (DGN, DWG, or DXF format) drawing files that contain the entire utility infrastructure (water, sewer, and stormwater) that was constructed during the project, as well as all other pertinent reference lines, project information, and survey control data. The infrastructure shall be drawn in the file at the as-built locations as surveyed and certified by the Professional Land Surveyor (except for buried features like bends, tees, crosses, and reducers whose

locations can be derived from CAD data). The AutoCAD or MicroStation file(s) shall be placed into a folder named "CAD" on the submitted media. Please note: the delivered CAD files should not be of the Plan/Profile sheets, but should be the overall working drawing in "model space" that is registered to North Carolina State Plane, NAD 1983.

PDF Files of Each As-Built Drawing Submitted

Submit one PDF file for each hard copy as-built drawing submitted according to the town's specifications. The PDF file(s) shall be placed into a folder named "PDF" on the submitted media. The PDF must include the signature and seal of the engineer.

Data Files for Water, Sanitary Sewer and Stormwater Infrastructure

Submit as-built data for direct import into the Town's Geographic Information System (GIS). This data shall consist of files in an ASCII Comma Separated Value (CSV or TXT) file format. The preferred horizontal coordinate system for the digitally submitted data as described below shall be North Carolina State Plane (NAD83), U.S. Survey Feet. The preferred vertical coordinate system for the digitally submitted data as described below shall be North American Vertical Datum, 1988 (NAVD 1988), U.S. Survey Feet. All of these file(s) shall be placed into a folder named "DATA" on the submitted media.

Several of the data files require the recording of materials for various pipes and structures. Please use the following standard codes where required:

Table 1.1: Material Codes

Code	Description
ACP	Asbestos Coated
Block	Concrete Block
Brick	Brick
CA	Corrugated Aluminum
CI	Cast Iron
CM	Corrugated Metal
CONC	Concrete
CU	Copper
DI	Ductile Iron
Earth	Earth
Foam core	Foam core
GALV	Galvanized
GRAVEL	GRAVEL
HDPE	High Density Polyethylene
PAVEMENT	PAVEMENT
PVC	Polyvinyl Chloride
RCP	Reinforced Concrete
STONE	Stone
VC	Vitrified Clay

Water Features– The file shall be named "WaterFeatures" and contains various elements that connect and control the distribution of water within and among various water lines. These features include both buried fittings (bends, crosses, end caps, reducers, and tees) and features that are accessible and/or visible at the surface (meters, valves, and hydrants). The Easting, Northing (X, Y) data for buried features are to be derived from the as-built CAD file(s).

Each line of the file shall contain the following information:

1. *ID, Type, Easting, Northing, Elevation, Description* (all on first line of the file).
2. Where:
    a. *ID* - A unique ID number assigned to each feature noted on the as-built plan and profile sheets (e.g. GV-1, HYD-1, etc.).
    b. *Type* - The type of feature. Provide the following codes as indicated in the table below:

Table 1.2: Water Features Descriptions

Feature Description	Type
Air Release Valve	ARV
Backflow Preventer	BFP, RPZ, RPA, etc
Bend	BEND
Blow Off	BLOWOFF
Cross	CROSS
End Cap	CAP
Fire Department Connection	FDC
Fire Hydrant	HYDRANT
Pressure Reducing Valve	PRV
Reducer/Increaser	REDUCER
Tee/Tapping Sleeve	TEE
Water Valve	VALVE
Water Line	WATERLINE
Water Meter	METER

    c. *Easting* – East coordinate value (from CAD if buried, +/- 0.1’ otherwise).
    d. *Northing* – North coordinate value (from CAD if buried, +/- 0.1’ otherwise).
    e. *Elevation* – Elevation : N/A if buried, +/- 0.1’ otherwise), collected as follows:

Table 1.3: Water Feature Elevation Locations

Feature Type	Elevation Location
HYDRANT	Top of the fire hydrant.
METER/VALVE/BLOWOFF	Center of the access structure.

    f. *Description* - The description of the item for the feature; encoded as follows:

Table 1.4: Water Feature Descriptions

Feature Type	Description
BLOWOFF	Size (in inches) of the blow off.
HYDRANT	Manufacturer and year of manufacture. This information will be on the hydrant (e.g. “CLOW-2004”).
METER	The size (in inches).
VALVE	The size (in inches) and type of the valve (e.g. 6 GV, 12 BFV)
WATERLINE	No description required.

Water Lines – The file shall be named "WaterLines" and shall contain the following data. There is one line of data for each water line that connects two water features.

1. *ID, Material, Size, FeatureID1, FeatureID2* (all on first line of the file).
2. Where:
    a. *ID* – A unique number assigned to each section of water line noted on the as-built plan and profile sheets (e.g. "WL-1").
    b. *Material* – Water line material (see Table 1.1: Material Codes above).
    c. *Size* – The size (in inches) of the water line.
    d. *FeatureID1* - The ID of the feature on the near end of the water line as shown on the as-built plans (e.g. "GV-1").
    e. *FeatureID2* - The ID of the feature on the far end of the water line as shown on the as- built plans (e.g. "HYD-1").

Example data files:

Water Features.txt

ID, Type,Easting,Northing,Elevation,Description
EXFH-1,HYDRANT,2021678.31,774030.93,287.00,unknown make-model-year
HYD-1,HYDRANT,2021596.64,774389.70,284.55,AMERICAN DARLING-2013
HYD-2,HYDRANT,2021623.72,774906.27,274.37,AMERICAN DARLING-2013
WV-1,VALVE,2021673.39,774026.22,277.36,6
WV-2,VALVE,2021671.72,774005.17,276.05,6
WV-3,VALVE,2021613.65,774389.86,278.19,6
WV-4,VALVE,2021640.29,774604.05,276.20,8
WV-5,VALVE,2021635.25,774610.46,276.21,8
WV-6,VALVE,2021640.09,774615.21,276.13,8
WV-7,VALVE,2021643.96,774903.70,268.46,6
WV-8,VALVE,2021672.35,774959.34,267.91,8
BO-1,BLOWOFF,2021484.45,774625.62,289.45,2
WM-1,METER,2021600.15,774760.41,280.08,0.625
WM-2,METER,2021599.45,774741.80,279.78,0.625
WM-3,METER,2021596.38,774674.04,278.79,0.625
WM-4,METER,2021596.51,774518.27,278.96,0.625
WM-5,METER,2021595.61,774500.97,279.59,0.625
WM-6,METER,2021593.95,774439.67,281.98,0.625
WM-7,METER,2021593.29,774376.83,283.53,0.625
WM-8,METER,2021591.61,774314.25,284.33,0.625
WM-9,METER,2021590.86,774248.34,285.25,0.625
WM-10,METER,2021589.35,774190.29,285.80,0.625
WM-11,METER,2021588.90,774129.95,288.31,0.625
WM-12,METER,2021588.08,774068.75,288.87,0.625
WM-13,METER,2021605.17,774013.81,286.71,0.625
WM-14,METER,2021620.90,774001.24,285.49,0.625
WM-15,METER,2021668.34,774140.25,284.37,0.625

WaterLines.txt

ID,Material,Size,WaterFeatureID1,WaterFeatureID2
WL-1,DI,6,WV-1,EXFH-1
WL-2,DI,8,WV-2,WV-1
WL-3,DI,8,BEND-1,TEE-2
WL-4,DI,6,TEE-2,HYD-1
WL-5,DI,8,TEE-2,TEE-1
WL-6,DI,8,TEE-1,CAP-1
WL-7,DI,8,TEE-1,TEE-4
WL-8,DI,6,TEE-4,HYD-2
WL-9,DI,8,TEE-4,BEND-2
WL-9,DI,8,BEND-2,WV-8
WL10,DI,8,TEE-3,BEND-3
WL11,DI,8,WV-8,BEND-0

Sewer Features – The file shall be named "SewerFeatures" and shall contain information about manholes, cleanouts, and other features listed in the table below. There is one line of data for each sewer feature. The Easting, Northing (X, Y) data for buried features can be derived from the as-built CAD file(s).

1. *ID, Type, Easting, Northing, Elevation, Invert, Size, Material* (all on first line of file)
2. Where:
    a. *ID* – If the feature is a manhole then the number as shown on the as-built drawings (e.g. "MH-1"). If feature is a clean out then a lot number or street address (e.g. "LOT10" or "123 Street Name").
    b. *Type* – The feature type, coded according to the following table:

Table 1.5: Sanitary Sewer Features Descriptions

Feature Description	Type
Clean Out	CLEANOUT
Drain	DRAIN
Force Main Valve	FMVALVE
Force Main Tee	FMTEE
Force Main Bend	FMBEND
Force Main	FORCEMAIN
Grease Trap	GREASETRAP
Manhole	MANHOLE
Oil-Water Separator	OWS

    c. *Easting* – East coordinate value (+/- 0.1').
    d. *Northing* – North coordinate value (+/- 0.1').
    e. *Elevation* – Elevation (+/- 0.1'), collected as follows:

Table 1.6: Sanitary Sewer Features Elevation Locations

Feature Type	Elevation Location
CLEANOUT	Surface adjacent to the cleanout.
DRAIN	Center of the drain grate.
FMVALVE	Center of the access structure.
GREASETRAP/OWS	Center of the structure
MANHOLE	Rim of the manhole.

    f. *Invert* – Invert elevation (+/- 0.1', required only for manholes).
    g. *Size* – diameter of manhole or cleanout (inches)
    h. *Material* – Construction material (see Table 1.1: Material Codes above).

Sewer Pipes - The file shall be named "SewerPipes" and shall contain the following data. There is one line of data for each sewer pipe.

If the pipe is a force main, values for *Size, Material, USId*, and *DSId* only need to be provided.

1. *ID, Size, Material, USId, DSId, USInv, DSInv, Slope, Length* (all on first line of the file).
2. Where:
    a. *ID* – A sequential pipe number as noted on the as-built drawings (e.g. "SSP-1").
    b. *Size* – Inside pipe diameter (inches).
    c. *Material* – Pipe material (see Table 1.1: Material Codes above).
    d. *USId* – Upstream manhole number as shown on the as-built drawings (e.g. "MH-1").
    e. *DSId* - Downstream manhole number as shown on the as-built drawings (e.g. "MH-2").
    f. *USInv* – Invert elevation at the upstream end.
    g. *DSInv* – Invert elevation at the downstream end. If downstream end is a drop connection provide both elevations separated by a slash (e.g. 344.10/340.03).
    h. *Slope* – The as-built grade of the pipe, expressed as a percentage and carried out to two decimal places.
    i. *Length* – The length (in linear feet) of the pipe as indicated on the as-builts carried out two decimal places.

Example data files:

SewerFeatures.txt

ID,Type,Easting,Northing,Elevation,Invert,Size,Material
SSMH-1,MANHOLE,2021869.21,774515.01,255.71,248.71,48,CONC
SSMH-2,MANHOLE,2021627.29,774521.95,277.32,265.07,48, CONC
SSMH-3,MANHOLE,2021624.41,774323.15,281.81,276.46,48,CONC
SSMH-4,MANHOLE,2021619.92,774064.44,284.86,279.51,48,CONC
SSMH-5,MANHOLE,2021635.93,774816.73,276.17,268.45,48,CONC
SSMH-6,MANHOLE,2021628.27,774583.69,276.42,265.67,48,CONC
SSMH-7,MANHOLE,2021482.89,774586.83,289.21,279.86,48,CONC
CO-1,CLEANOUT,2021602.12,774757.09,279.64,0.00,4,PVC
CO-2,CLEANOUT,2021601.25,774738.38,279.59,0.00,4,PVC
CO-3,CLEANOUT,2021598.65,774677.44,278.36,0.00,4,PVC
CO-4,CLEANOUT,2021597.22,774514.96,278.91,0.00,4,PVC
CO-5,CLEANOUT,2021596.64,774497.90,279.53,0.00,4,PVC
CO-6,CLEANOUT,2021595.35,774436.82,281.93,0.00,4,PVC
CO-7,CLEANOUT,2021594.58,774374.24,283.20,0.00,4,PVC
CO-8,CLEANOUT,2021592.77,774311.81,284.25,0.00,4,PVC
CO-9,CLEANOUT,2021592.37,774246.19,285.13,0.00,4,PVC
CO-10,CLEANOUT,2021590.28,774187.48,286.03,0.00,4,PVC
CO-11,CLEANOUT,2021589.75,774126.40,288.49,0.00,4,PVC
CO-12,CLEANOUT,2021588.82,774065.51,288.80,0.00,4,PVC
CO-13,CLEANOUT,2021611.72,774007.75,286.25,0.00,4,PVC
CO-14,CLEANOUT,2021627.22,773999.07,285.47,0.00,4,PVC
CO-15,CLEANOUT,2021667.72,774143.70,284.12,0.00,4,PVC
CO-16,CLEANOUT,2021669.03,774205.83,283.26,0.00,4,PVC
CO-17,CLEANOUT,2021670.19,774267.36,281.68,0.00,4,PVC
CO-18,CLEANOUT,2021671.77,774327.39,281.45,0.00,4,PVC
CO-19,CLEANOUT,2021672.69,774390.72,281.43,0.00,4,PVC
CO-20,CLEANOUT,2021673.02,774453.41,279.19,0.00,4,PVC
CO-21,CLEANOUT,2021673.72,774540.74,277.24,0.00,4,PVC

SewerPipes.txt

ID, Size,Material,USId,DSId,USInv,DSInv,Slope,Length
SSP-1,8.00,PVC,SSMH-1,SSMH-2,251.25,249.81,0.68,212.02
SSP-2,8.00,DI,SSMH-2,SSMH-3,261.39,254.80,3.33,198.18
SSP-3,8.00,PVC,SSMH-3,SSMH-4,264.69,261.64,3.47,88.01
SSP-4,8.00,PVC,SSMH-4,SSMH-5,268.44,264.89,3.76,94.36
SSP-5,8.00,PVC,SSMH-5,SSMH-6,266.74,265.95,0.57,137.43
SSP-6,8.00,PVC,SS-6,SSMH-7,268.01,266.79,0.83,147.21
SSP-7,8.00,PVC,SSMH-7,SSMH-1,268.19,266.84,0.74,183.48

Stormwater Features – The file shall be named "StormwaterFeatures." A storm water feature is either a grated drop inlet, hooded catch basin, curb inlet, drop/yard/grate inlet (cast iron grate cover with slotted openings), flared end section outlet, flared end section inlet, headwall inlet, headwall outlet, junction box, manhole, riser pipe, open throat catch basin (solid concrete cover, supported on the corners with side flow entry) or weir box. There is one line of data for each storm water structure.

1. *ID, Type, Easting, Northing, Elevation, Invert, Material* (all on first line of the file).
2. Where:
    a. *ID* – Structure number as shown on the as-built drawings (e.g. "SWMH-1", "CB-2", "YI- 4","DI-3").
    b. *Type* – Type of storm water feature, to be encoded according to the following table:

Table 4.7: Stormwater Features Description

Feature Description	Type
Grated drop inlet	GDI
Hooded Catch Basin	HCB
Curb Inlet (frame, no grate)	CI
Drop/Grate/Yard Inlet (grate flush with ground)	DI
Flared End Section Inlet/Outlet	FESI, FESO
Headwall Inlet/Outlet	HWI, HWO
Junction Box	JBOX
Manhole	SWMH
Pond Outlet Riser	RISER PIPE
Slab Inlet/Open Throat Catch Basin	OTCB
Weir Box	WEIR BOX

    c. *Easting* – East coordinate value (+/- 0.1').
    d. *Northing* – North coordinate value (+/- 0.1').
    e. *Elevation* – Elevation (+/- 0.1'), collected as follows:

Table 4.8: Stormwater Features Elevation Locations

Feature Type	Elevation Location
GRATED DROP INLET	Back of curb, center of box
HOODED CATCH BASIN	Back of curb, center of box
CURB INLET	Back of curb, center of box
DROP INLET	Center of grate
FLARED END SECTION	Top of end section
HEADWALL	Center of the headwall
JUNCTION BOX	Center of cover
MANHOLE	Center of cover
RISER PIPE	Top of the riser
SLAB INLET	Top of slab, center of box
WEIR BOX	Top center of box

    f. *Invert* – The invert elevation.
    g. *Material* – Construction material (see Table 1.1: Material Codes above).

Stormwater Pipes – The file shall be named "StormwaterPipes" and shall contain the following data. There is one line of data for each stormwater pipe. .

1. *ID,Size, Material, USId, DSId, USInv, DSInv, Slope, Length* (all on first line of the file).
2. Where:
    a. *ID* – A sequential pipe number as noted on the as-built drawings (e.g. "SWP-1").
    b. *Size* – Pipe diameter (inches). Non-circular pipe sizes can be indicated with two dimension values separated by an "X" (e.g. "4x6").
    c. *Material* – Pipe material (see Table 1.1: Material Codes above).
    d. *USId* – Upstream feature ID number as shown on the as-built drawings (e.g. "SWMH-1").
    e. *DSId* - Downstream feature ID number as shown on the as-built drawings (e.g. "CB-2").
    f. *USInv* – Invert elevation at the upstream end.
    g. *DSInv* – Invert elevation at the downstream end.
    h. *Slope* – The as-built grade of the pipe, expressed as a percentage carried out to two decimal places.
    i. *Length* – The length (in linear feet) of the pipe as indicated on the as-builts and carried out to two decimal places.

Stormwater Channels (constructed channels) – The file shall be named "StormwaterChannels" and shall contain the following data. Each line of the file shall correspond to a location collected at 25 foot stations along the centerline of the open channel. Each line of the file shall contain the following information:

1. *ID, Easting, Northing, Elevation* (all on first line of the file)
2. Where:
    a. *ID* – is a unique number assigned to each section of open channel. The ID for an open channel changes at any intersection with another open channel and/or stormwater structure.
    b. *Easting* – East coordinate value (+/- 0.1').
    c. *Northing* – North coordinate value (+/- 0.1').
    d. *Elevation* – Elevation at the bottom of the channel (+/- 0.1').
    e. *Material* – see table 1.1

StormwaterFeatures.txt

ID,Type,Easting,Northing,Elevation,Invert,Material

YI2B-588,DI,2063280.79,794463.69,419.54,416.95,HDPE
CB2B-40,CI,2063259.89,794278.14,417.6,404.19,CONC
CB2B-734,CI,2063250.51,794307.18,417.52,411.07,CONC
CB2B-589E,CI,2063211.2,794324.37,417.47,414.19,CONC
CB2B-588,CI,2063310.79,794384.15,417.42,413.28,CONC
CB2B-589,CI,2063183.17,794312.32,417.4,414.7,CONC
JB2B-589W,CI,2063077.31,794216.91,415.53,404.88,CONC
CB2B-41,CI,2063099.31,794184.38,415.08,402.29,CONC
CB2B-39,CI,2063358.56,794299.49,414.84,406.52,CONC
CB3146,CI,2063536.22,794359.21,413.95,408.41,CONC
CB2B-42,CI,2063020.9,794130.48,412.69,400.31,CONC
CB2B-612S,CI,2063002.78,794154.94,412.69,402.13,CONC
CB3044,CI,2063499.39,794298.24,412.44,408.03,CONC
YI2B-610,DI,2062984.32,794349.5,412.42,410.15,HDPE
CB3043,GDI,2063501.68,794328.1,412.09,409.05,CONC
CB2B-623W,GDI,2062444.61,794474.19,411.21,404.46,CONC
CB2B-612,GDI,2062958.96,794163.73,410.88,407.56,CONC
CB2B-613,GDI,2062933.99,794146.18,410.82,407.9,CONC
CB2B-624N,GDI,2062385.87,794402.84,410.26,403.04,CONC
YI2B-612,DI,2063070.33,794225.16,409.86,405.23,HDPE
YI2B-621,GDI,2062556.4,794381.02,409.63,407.52,CONC
CB2B-638,GDI,2062369,794334.88,409.22,402.17,CONC
CB2B-624,GDI,2062387.8,794359.01,409.17,402.44,CONC
CB2B-43,GDI,2062888.68,794039.35,408.67,398.76,CONC
CB2B-685,GDI,2062307.85,794356.56,408.41,402.1,CONC
CB2B - 638N,GDI,2062324.38,794328.66,408.18,400.87,CONC
YI2B-622,DI,2062504.45,794424.29,407.88,405.53,HDPE
YI2B-631,GDI,2062775.97,794109.33,402.72,400.6,CONC
CB2B-45,GDI,2062687.47,793911.45,402.62,392.63,CONC
YI2B-637,DI,2062310.25,794188.07,395.79,393.04,HDPE
CB2B-632S,GDI,2062549.89,793887.09,395.62,389.47,CONC
CB2B-656,GDI,2062391.44,793853.12,393.52,391.46,CONC
YI2B-643,GDI,2062498.28,793971.61,393.42,391.22,CONC
CB2B-644,GDI,2062421.01,793863.49,393.21,389.82,CONC
CB2B-693,CI,2062472.43,793822.27,391.82,386.38,CONC
CB2B-644S,CI,2062459.83,793849.96,391.71,388.19,CONC
CB2B-645,CI,2062453.48,793784.31,391.54,385.53,CONC
CB2B-675,CI,2061985.47,793965.29,389.59,383.52,CONC
CB2B-651,CI,2062013.96,793952.42,387.06,382.45,CONC
JB2B-665,JBOX,2062453.26,793436.94,380.94,364.54,CONC
YI2B-662,DI,2062064.69,793664.47,376.52,373.65,HDPE
JB12,CI,2062645.51,793473.09,376.15,371.29,CONC
JB13,CI,2062544.24,793458.62,374.41,370.03,CONC
HW2B-664,HWO,2062326.4,793410.36,368.9,368.9,CONC
YI2B-572,DI,2063098.6,794716.98,415.58,413.47,HDPE
YI3143,DI,2063323.74,794938.28,415.02,411.81,HDPE
YI3142,DI,2063286,794982.46,412.85,409.63,HDPE
YI3141,DI,2063173.93,795094.46,409.3,406.22,HDPE
YI2B-576,DI,2062950.47,794865.47,405.95,402.69,HDPE
CB2B-600,CI,2062801.93,794791.3,405.71,400.1,CONC
CB2B-578,CI,2062831.38,794805.33,405.47,400.39,CONC
YI2B-600,DI,2062734.63,794679.41,404.91,401.96,HDPE
YI2B-694,DI,2062524.66,794801.16,402.17,395.32,HDPE
HW2B-34,HWO,2062472.16,794838.63,396.51,396.51,CONC

StormwaterPipes.txt

ID,Size,Material,USId,DSId,USInv,DSInv,Slope,Length

SDP2-103,15,CONC,CB3146,CB3043,410.41,409.05,2.93,46.49
SDP2-102,15,CONC,CB3043,CB3044,409.05,408.03,3.41,29.94
SDP2-104,18,CONC,CB3044,CB2B-39,408.03,406.62,1,140.84
SDP2B-688,18,CONC,CB2B-39,CB2B-40,406.52,404.69,1.81,100.95
SDP2B-689,24,CONC,CB2B-40,CB2B-41,404.19,402.5,0.91,185.95
SDP2B-690,24,CONC,CB2B-41,CB2B-42,402.29,400.81,1.56,95.15
SDP2B-691,30,CONC,CB2B-42,CB2B-43,400.31,399.16,0.72,160.58
SDP2B-692,30,CONC,CB2B-43,CB2B-44,398.76,395.99,1.8,153.61
SDP2B-693,30,CONC,CB2B-44,CB2B-45,395.84,392.82,3.55,85.08
SDP2B-694,30,CONC,CB2B-45,CB2B-693,392.63,386.48,2.64,232.8
SDP2B-695,36,CONC,CB2B-693,CB2B-645,386.38,385.63,1.77,42.43
SDP2B-696,36,CONC,CB2B-645,CB2B-647,385.53,378.38,4.92,145.3
SDP2B-697,36,CONC,CB2B-647,CB2B-658E,378.28,377.94,1.13,30.14
SDP2B-698,36,CONC,CB2B-658E,CB2B-658,377.84,377.6,0.49,49.07
SDP2B-699,36,CONC,CB2B-658,CB2B-663,376.7,376.24,1.56,29.57
SDP2B-700,42,CONC,CB2B-666,CB2B-663,368.63,366.56,0.74,278.89
SDP2B-701,48,CONC,CB2B-663,CB2B-663E,366.18,365.79,0.8,48.89
SDP2B-702,48,CONC,CB2B-663E,JB2B-665,365.59,364.7,0.81,109.31
SDP2B-706,15,CONC,CB2B-671,CB2B-650S,376.65,375.64,3.28,30.76
SDP2B-707,24,CONC,CB2B-650,CB2B-650S,377.04,373.83,3.13,102.65
SDP2B-708,30,CONC,CB2B-650S,CB2B-662,373.11,371.81,1.06,122.39
SDP2B-709,24,CONC,CB2B-668,CB2B-662,371.77,369.76,6.72,29.9
SDP2B-222,42,CONC,CB2B-662,CB2B-666,369.56,368.75,0.76,106.54
SDP2B-223,15,CONC,CB2B-589,CB2B-589E,414.7,414.24,1.51,30.51
SDP2B-224,15,CONC,CB2B-589E,CB2B-734,414.19,413.77,0.98,42.9
SDP2B-731,15,CONC,CB2B-734,CB2B-40,411.07,410.84,0.75,30.52
SDP2B-730,15,CONC,CB2B-588,CB2B-734,413.28,412.5,0.8,97.76
SDP2B-723,15,CONC,CB2B-613,CB2B-612,407.9,407.61,0.95,30.52
SDP2B-724,15,CONC,CB2B-612,CB2B-612S,407.56,407.13,0.96,44.69
SDP2B-725,18,CONC,CB2B-612S,CB2B-42,402.13,401.21,3.02,30.45
SDP2B-716,18,CONC,CB2B-631,CB2B-632,398.42,398.25,0.56,30.33
SDP2B-717,18,CONC,CB2B-631S,CB2B-631,398.87,398.68,0.38,50.3
SDP2B-718,24,CONC,CB2B-632,CB2B-45,397.91,394.92,4.34,68.84
SDP2B-710,15,CONC,CB2B-656,CB2B-644,391.46,389.92,4.91,31.34
SDP2B-711,15,CONC,CB2B-644,CB2B-644S,389.82,388.59,2.99,41.11
SDP2B-236,24,CONC,CB2B-644S,CB2B-693,388.19,387.48,2.33,30.41
SDP2B-728,15,HDPE,YI2B-610,YI2B-612,410.15,405.43,3.12,151.18
SDP2B-729,18,CONC,YI2B-612,JB2B-589W,405.23,404.93,2.78,10.81
SDP2B-721,15,CONC,YI2B-631,CB2B-613S,400.6,399.69,1,91.31
SDP2B-722,18,CONC,CB2B-613S,CB2B-631S,399.57,399.14,0.47,92.32
SDP2B-713,15,HDPE,YI2B-643,YI2B-644,391.22,390.29,1.27,72.94
SDP2B-714,15,CONC,YI2B-644,CB2B-632S,390.14,389.52,2.33,26.55
SDP2B-715,18,CONC,CB2B-632S,CB2B-644S,389.47,388.39,1.11,97.41
SDP2B-687,24,CONC,YI2B-662,CB2B-662,373.65,369.96,12.74,28.97
SDP2B-2,15,CONC,YI2B-588,CB2B-588,416.95,414.28,3.14,85.02
SDP2B-4,48,CONC,JB2B-665,HW2B-664,364.54,363.98,0.43,129.62
SDP2B-23,24,CONC,CB2B-639N,CB2B-639,390.18,389.15,1.88,54.7
SDP2B-24,24,CONC,CB2B-639,CB2B-653E,389.1,388.93,0.56,30.5
SDP2B-25,24,CONC,CB2B-653E,CB2B-653,388.88,388.49,0.69,56.9
SDP2B-5,24,CONC,CB2B-653,CB2B-651,388.17,383.29,2.7,180.89
SDP2B-6,24,CONC,CB2B-651,CB2B-650,382.45,376.74,5.15,110.93
SDP - 7,24,CONC,CB2B-638W,CB2B-639N,390.75,390.28,0.51,92.38
SDP2B-47,18,CONC,CB2B-624,CB2B-638,402.44,402.27,0.5,30.59
SDP2B-19,18,CONC,CB2B-624N,CB2B-624,403.04,402.62,0.96,43.87
SDP2B-18,15,CONC,CB2B-685,CB2B - 638N,402.1,401.75,1.08,32.43
SDP2B-20,24,CONC,CB2B - 638N,CB2B-638W,400.87,396.9,3.37,117.96
SDP2B-28,15,CONC,CB2B-681,CB2B-639N,391.98,391.48,1.45,34.58
SDP2B-41,15,CONC,YI2B-637,JB2B-639,393.04,392.11,1.32,70.31
SDP2B-40,15,HDPE,YI2B-636,YI2B-637,393.81,393.09,1.06,67.74