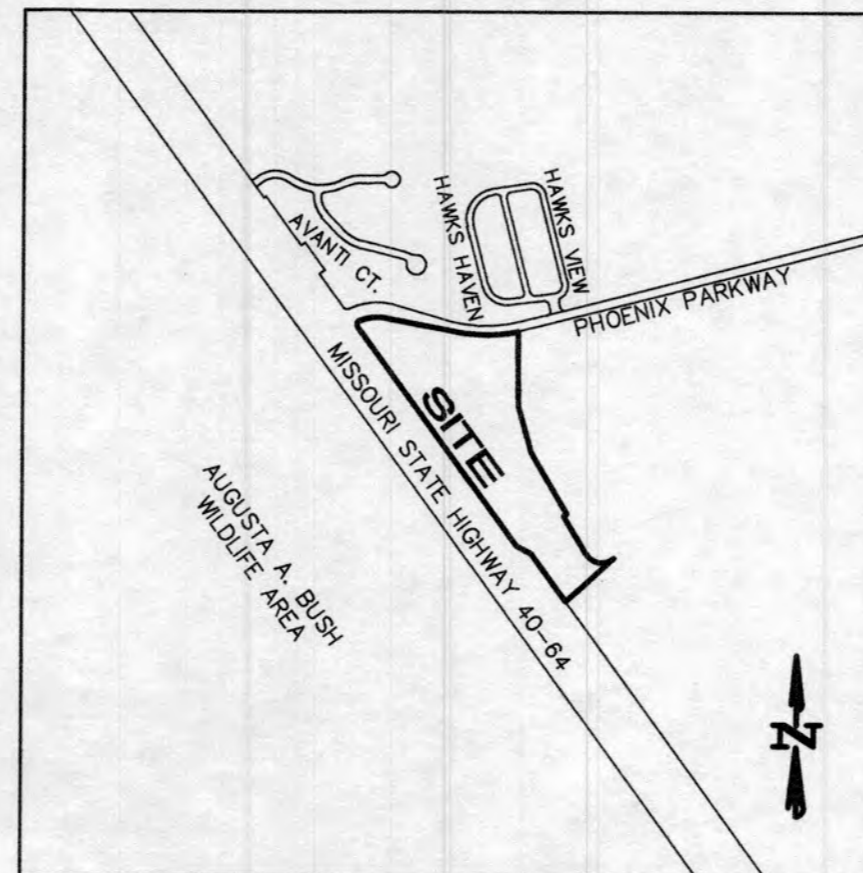
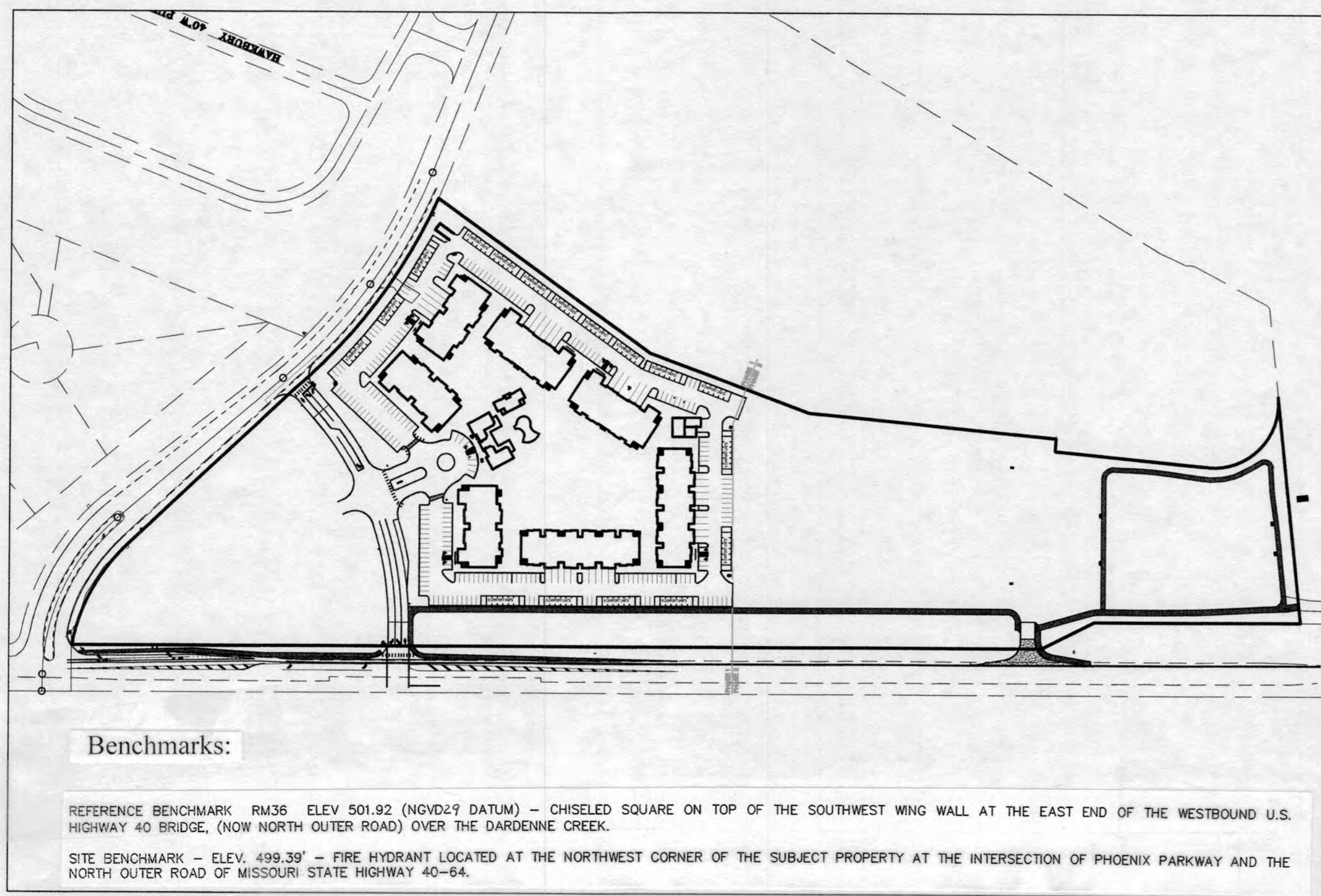


# A SET OF CONSTRUCTION PLANS FOR WINGHAVEN POINTE

A TRACT OF LAND BEING PART OF U.S. SURVEY 1641, TOWNSHIP 46 NORTH, RANGE 3 EAST OF THE FIFTH PRINCIPAL MERIDIAN CITY OF O'FALLON, ST. CHARLES COUNTY, MISSOURI



## Development Notes:

- Existing Zoning: MUTDD (Mixed-Use Traditional Dev. Dist.)
- Current Owner: Winghaven Land Investors, LLC  
1001 Boardwalk Place  
O'Fallon, MO 63368
- Contract Purchaser: Rolwes Development, LLC  
13100 Manchester, Suite 65  
St. Louis, MO 63131
- Flood Note: We have determined the horizontal location of this tract of land in St. Charles County, Missouri, by scaling the property in reference to the following Flood Insurance Rate Map (FIRM), St. Charles County, Missouri and incorporated areas, Map Number 29183C0430G, Community Panel Number (City of O'Fallon, 290316 0430 G with an effective date of January 20, 2016). By express reference to this map and its legend, this tract of land is indicated to be within the following zones: ZONE X - Areas determined to be outside the 0.2% annual chance floodplain, ZONE X (hatched) - Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot, and ZONE AE - Special flood hazard areas (SFHAs) subject to inundation by the 1% annual chance flood in which base flood elevations determined.
- Site Coverage:  
Buildings - 134,402.92 sq.ft. - 12.6%  
Pavement - 293,247.36 sq.ft. - 27.5%  
Green Space - 637,391.72 sq.ft. - 59.9%
- Public street to be 7" Concrete Pavement with a 4" Rock Base and a minimum slope of 2% design grade. All parking lot areas to be 3" Asphalt Pavement over 8" Rock Base. All drive aisles to be 4" Asphalt Pavement over 8" Rock Base.
- Detention will be provided in the proposed lake for the 100 year storm for the Dardenne Creek Watershed with development for residential area only.
- A detailed Landscape Plan will be provided as required by Article X of the Zoning Code.
- All paving to be in accordance with St. Charles County Standards and Specifications except as modified by the City of O'Fallon Ordinances.
- Sidewalks, curb ramps, and accessible parking spaces shall be constructed in accordance with the current approved "Americans with Disabilities Act Accessibility Guidelines" (ADAAG) along with the required grades, materials, and specifications and signage. All crosswalks shall not be more than 2% slope in any direction.
- All water meters shall have the location approved by the Public Water Supply District No. 2.
- The location of all siltation control devices (silt fences and sedimentation basins) shall follow St. Charles County Soil and Water Conservation District Erosion and Sediment Control Guidelines.
- A photometric plan will be submitted with the construction plans. Lighting shall be designed for a maximum of 0.5 foot candles along property line. Lighting values will be reviewed on site prior to the final occupancy inspection. Corrections will need to be made if not in compliance with City standards.
- All Entrance Sign locations and sizes must be approved separately through the Planning & Development Division.
- All new utilities will be located underground.
- Landscape Design shall follow city codes.

Street Tree Calculations:  
1 tree per 50 feet of ROW (Technology Drive and Connector Road)  
2,863 feet / 50 feet = 58 trees required  
53 new trees provided (5 existing to remain) = 58 provided

Open Spaces:  
1 tree for every 4,000 s.f. landscaped open space  
109,648 s.f. / 4,000 s.f. = 28 trees required  
Total trees provided = 28

Interior Landscaping Required:  
Not less than 6% of interior parking lot shall be landscaped.  
714 spaces x 270 = 192,780 x 6% = 11,567 sq.ft. landscaping required  
Total 11,709 sq.ft. landscaping provided

- All public utilities will be covered by an easement as required by local agencies.
- All required drainage easements and utility easements will be dedicated on the Record Plat.
- All sanitary laterals to be a minimum of 4".
- All water service lines to be a minimum of 1".
- Additional silt control measures shall be installed to protect downstream wetland areas from silt and mud if required.
- Future access to commercial lot shall be from new connector road only. Detention will be provided with the residential area to maximize the amount of commercial opportunity.
- Site will comply with the Post Construction Storm Water Best Management Practices for storm water quality per code Section 405.247.
- City approval of the construction plans does not mean that any building can be constructed on the lots without meeting the building setbacks as required by the Zoning Code.
- Provide a minimum one week notice to Water District before construction begins.
- All water mains, valves, fittings, hydrants and related items are to be installed in accordance with the current St. Charles County PWS&J2 Guidelines and specifications.
- All water meter pits, valves and pyramid boxes must be installed within green space.
- All water lines after master meter vault will be private. All water lines to be SDR-21 PVC pipe. All private fire hydrants must be painted red.
- This site is proposed to have a grading balance onsite. Should excessive soils be removed from this site, it will be placed on the commercial lot.
- Possible future gates are shown for information only. Any future gates or fencing will require a separate submittal and permit.
- The restriping or reconfiguration of the bike system due to the proposed entrance configurations will be the responsibility of the developer.

## Municipal Code Requirements:

- To be addressed on the construction plans:
- The Traffic Management Policy requires an approved traffic study on this development based on the proposed traffic volumes provided by the design engineer. The study will allow staff the ability to determine street types and widths as well as improvements to adjacent streets with turn lanes as well as entrance configurations.
  - Based on the commercial and residential use as well as the provided traffic volume from the design engineer, it appears the public street.
  - At the intersection of the public right-of-way with Technology Drive, provide striped right-out, left-out and inbound lanes.
  - On the main entrance to the site, the maximum width of the entrance lane and the exit lane is 20'. Reduce the lane widths. For comparison, Boardwalk Village only has 18-foot wide one-way streets.
  - In reviewing the grading/storm sewer system, it does not appear that there is sufficient fall across the property to the normal pool of the lake. Review and revise as necessary. Storm sewer discharge pipes shall have the flowline at or above the normal pool. Development Note #7 shall be removed from the plans. It does not apply to this development.
  - Development Note #7 shall be removed from the plans. It does not apply to this development.
  - Revise Development Note #30 to state that detention will be provided with the residential area to maximize the amount of commercial opportunity.
  - Development Note #39 indicates a grading balance for this site; however, based on the provided grades, it will take approximately 2-feet of fill over the residential area to equal the amount removed from the basin of which there is minimal fill being added to the residential area. Provide a Development Note stating that should excessive soils be removed from this site and placed within the jurisdiction of the City of O'Fallon, a grading plan for that site will need to be reviewed and approved. In addition, if not deposited within the City of O'Fallon limits, provide haul route to determine if City streets will be impacted.
  - Provide a 10 foot wide utility easement along the east side of the public road.
  - There does not appear to be sufficient fall to the normal pool elevation of the lake. Storm sewer discharge pipes shall have a discharge flow line at or above the normal pool.
  - Although the petitioner is not required to gate the community, they have verbally discussed this option with staff. The petitioner shall provide a detail and the location of the fence with the construction plans. The fence location shall not deter access to the public trail/bike system near the lake/retention basin that can be connected to the Great Rivers Greenway trail system.
  - The petitioner shall provide a detail and the location of the fence with the construction plans.
  - All subdivision monuments, identification signage and/or directional signage shall be reviewed and approved by the Planning Division prior to installation.
  - An Amended Area Plan will be required when the commercial portion of this development is proposed to be constructed.
  - Detailed information including the covenants and restrictions on the development standards and architectural controls shall be provided for Winghaven Pointe. Such standards and controls shall be consistent with the concepts of the Mixed-Use Traditional Development District.
  - Provide a detail of the trash/compressor enclosure on the construction plans.
  - Provide a photometric plan in accordance with the Code.
  - The City of O'Fallon has created Construction Plan sheets which format shall be used when submitting Construction Plans for review. The Construction Plan sheets can be found at [http://www.ofallon.mo.us/dept\\_PW\\_engineering.htm](http://www.ofallon.mo.us/dept_PW_engineering.htm)
  - Provide a landscaping plan with calculations, heights of trees, etc. per chapter 402 of the Code. The plans shall show mature height of vegetation and planting setback notes.

## Condition of Approval

- The plans shall be submitted to MODOT for review and comment. Provide MODOT approval for the entrances on Technology Drive. ANY Comments set forth by MODOT shall be addressed on the Construction Plans.
- The bike system along Technology Drive was installed by the City and has been maintained by the City. A note shall be added that states that re-stripping or re-configuration of the bike system due to the proposed entrance configurations will be the responsibility of the developer.
- The applicant shall propose expanded pedestrian facilities along Phoenix Parkway where the right-of-way allows.
- Provide a 10 foot wide trail easement to the east property line near the lake for the future expansion of the Great Rivers Greenway trail.

### Storm and Sanitary Sewer Measurements

As of 12/5/2018, I have measured the existing sewer lengths, sizes, flowlines, depths of structures and the results of those measurement are shown on this Final Measurement drawing.

Sincerely,

*Daniel R. Zervas*  
Daniel R. Zervas, LS-2430  
Burdine and Associates, Inc. LS-219D



CITY OF O'FALLON  
COMMUNITY DEVELOPMENT DEPARTMENT  
ACCEPTED FOR CONSTRUCTION  
BY: Juanita Swanson DATE 06/05/2020  
PROFESSIONAL ENGINEER'S SEAL  
INDICATES RESPONSIBILITY FOR DESIGN

Rev. 8-22-19

FINAL MEASUREMENT DRAWING 1 OF 11

## Drawing Index

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| 1     | COVER SHEET                                       | Plan View |
| 2     | NOTES   |           |
| 3     | DEMO PLAN   |           |
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| 8-11  | GRADING PLAN                                      |           |
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| 16-19 | SEDIMENT & EROSION CONTROL PLAN                   |           |
| 20    | MODOT PLAN  |           |
| 21    | SANITARY SEWER PROFILES                           |           |
| 22-23 | STORM SEWER PROFILES                              |           |
| 24    | STORM SEWER PROFILES, HYDRAULICS & STREET PROFILE |           |
| 25    | PRE-DEVELOPED DRAINAGE AREA MAP                   |           |
| 26-29 | POST-DEVELOPED DRAINAGE AREA MAP                  |           |
| 29A   | LANDSCAPE PLAN                                    |           |
| 30-37 | DETAILS   |           |
| 38    | BASIN SECTIONS & DETAILS                          |           |

\* City of O'Fallon Construction work hours per City Ordinance 3429 as shown in section 500.420 of the Municipal Code of the City of O'Fallon are as follows:

October 1 through May 31  
7:00 A.M. To 7:00 P.M. Monday Through Sunday  
June 1 Through September 30  
6:00 A.M. To 8:00 P.M. Monday Through Friday  
7:00 A.M. To 8:00 P.M. Saturday and Sunday

\* The area of this phase of development is: Existing Phase 3 Area: 261.33 acres - 22.85 acres(R/W) = 238.48 Ac. Net

Residential = 149.11 acres (63%)  
Non-Residential = 89.37 acres (37%)

Add Winghaven Pointe  
Area = 261.33 + 24.45 = 285.78 Ac.  
R/W = 22.85 + 0.62 = 23.47 Ac.  
Net Area = 262.31 Acres  
Residential = 149.11 + 19.83 = 168.94 (64.4%)  
Non-Residential = 89.37 + 4.00 = 93.37 (35.6%)

\* The area of land disturbance is 20.76 Acres

\* Number of proposed units is 1009 (318 in Winghaven Pointe)

### Building setback information:

Front yard	= 20 feet
Side yard	= 15 feet
Rear yard	= 15 feet
Parking	= 10 feet (along lot perimeter)
Front to Front	= 50 feet
Front to Back	= 50 feet
Back to Back	= 50 feet
Side to Side	= 20 feet
Front to Side	= 25 feet
Back to Side	= 25 feet
Corner to Corner	= 20 feet

\* The estimated sanitary flow in gallons per day is 77,260 GPD

### Parking calculations:

Single Family Units: 1.5 spaces per Unit + 1 per additional bedroom  
118 Units (1 Bedroom) X 1.5 per Unit = 177 spaces required  
168 Units (2 Bedroom) X 2.5 per Unit = 420 spaces required  
32 Units (3 Bedroom) X 3.5 per Unit = 112 spaces required  
Total Spaces Required = 709 w/1 covered space per unit (318)  
Spaces Provided = 318 covered spaces & 407 open spaces  
Handicap spaces: 2% of total required(15),17 provided with 4 for "Lift Van Only" noted on the plans.

Community Center: 1 space per 10 Dwelling Units  
318 Units/10 = 32 spaces Required  
Spaces Provided = 32 w/1 handicap space

\* Tree preservation calculations: 5 existing trees onsite, 5 to remain, 100% saved.

PROJECT TITLE:

WINGHAVEN POINTE

Box Project # 14-16-403 Issue Date 03/18/2016

ENGINEERING  
PLANNING  
SURVEYING



221 Point West Blvd.  
St. Charles, MO 63301  
636-929-5502  
FAX 636-929-1718

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CLIFFORD L. HEITMANN  
CIVIL ENGINEER  
E29817

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### REVISIONS

DATE	DESCRIPTION
04/25/2016	DCSD & PWS&J COMMENTS
05/16/2016	CITY REVIEW
06/15/2016	CITY REVIEW & DCSD COMMENTS
07/29/2016	CITY REVIEW

### Utility Contacts

Duckett Creek Sanitary District  
3550 Highway K  
O'Fallon, MO 63368  
636-441-1244

Public Water Supply District No. 2  
P.O. Box 967  
O'Fallon, MO 63366  
636-561-3737 Ext. 135

Storm Sewer  
City of O'Fallon  
100 N. Main St.  
O'Fallon, MO 63366  
636-281-2858

Ameren UE  
200 Callahan Road  
Wentzville, MO 63385  
636-639-8312

Gas  
Laclede Gas Company  
6400 Graham Road  
St. Louis, MO 63134  
314-522-2297

Telephone  
AT&T  
402 North Third Street  
St. Charles, MO 63301  
636-949-4272

Charter Communications  
941 Charter Commons  
Town & Country, MO 63017  
1-888-438-2427

Wentzville Fire District  
209 West Pearce Blvd.  
Wentzville, MO 63385  
636-332-9869

Developer / Owner:

ROLWES DEVELOPMENT, L.L.C.  
13100 MANCHESTER ROAD, SUITE 65  
ST. LOUIS, MISSOURI 63131  
314-821-9600

COVER SHEET

P+Z No. #9831.65.02

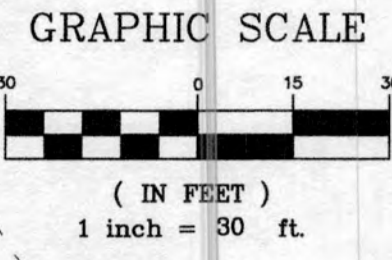
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Page No.

1 of 38

VANTI 50'W) COURT

14



15

MATCHLINE - SEE SHEET 5

**PHOENIX (60'W) PARKWAY**

579°13'50"E - 427.45'

20' BUILDING SETBACK LINE

PROPOSED 10' WIDE EASEMENT

**COMMERCIAL OUTLOT**  
4.00 ACRES

INSTALL CONSTRUCTION ENTRANCE SIGNS ALONG PHOENIX PARKWAY AND MAINTAIN UNTIL PROJECT COMPLETED

NEW SIDEWALK AND CROSS WALK SHALL BE INSTALLED AND USEABLE PRIOR TO REMOVING EX. WALK IN ENTRANCE LIMITS. CONSTRUCTION SHALL BE COORDINATED SO SIDEWALK ACCESS IS RESTRICTED ONLY 1 DAY.

NOTE:  
THE RE-STRIPING OR RECONFIGURATION OF THE BIKE SYSTEM DUE TO THE PROPOSED ENTRANCE CONFIGURATIONS WILL BE THE RESPONSIBILITY OF THE DEVELOPER.

SEE MODOT PLAN SHEET 20 FOR INTERSECTION AND WIDENING DETAILS



**NORTH OUTER ROAD**  
MISSOURI STATE HIGHWAY 40-64

"As-Built"

FINAL MEASUREMENT DRAWING 2 OF 11

UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE THEIR LOCATIONS SHALL BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATION OF ALL UNDERGROUND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL BE LOCATED PRIOR TO ANY GRADING OR CONSTRUCTION OF THE IMPROVEMENTS.

**PROJECT TITLE:**  
WINGHAVEN POINTE

**ENGINEERING PLANNING SURVEYING**  
221 Point West Blvd.  
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07/29/2016	CITY REVIEW

**Developer / Owner:**  
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ST. LOUIS, MISSOURI 63131  
314-821-9600

**P+Z No.**  
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**City No.**  
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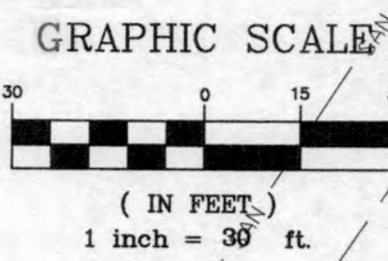
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**SITE PLAN**

Issue Date: 03/16/2016  
Box Project # 14-16403

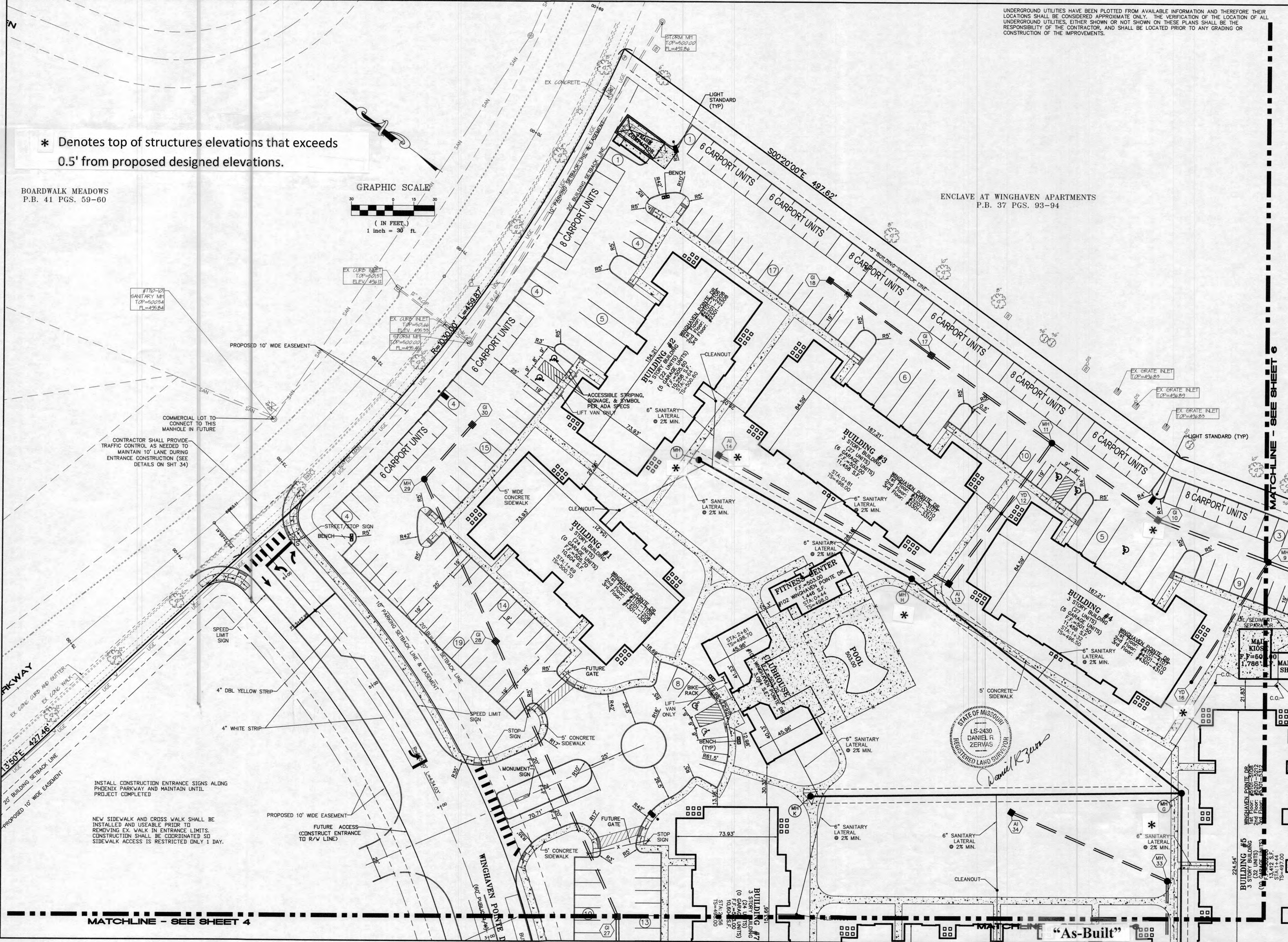
\* Denotes top of structures elevations that exceeds 0.5' from proposed designed elevations.

BOARDWALK MEADOWS  
P.B. 41 PGS. 59-60



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ENCLAVE AT WINGHAVEN APARTMENTS  
P.B. 37 PGS. 93-94



MATCHLINE - SEE SHEET 6

PROJECT TITLE:  
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FAX 636-829-1718



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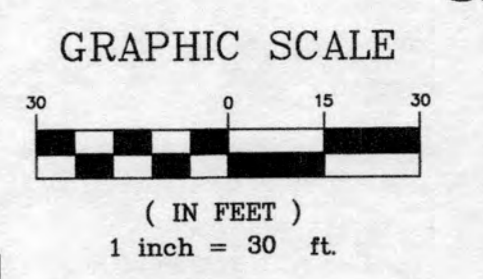
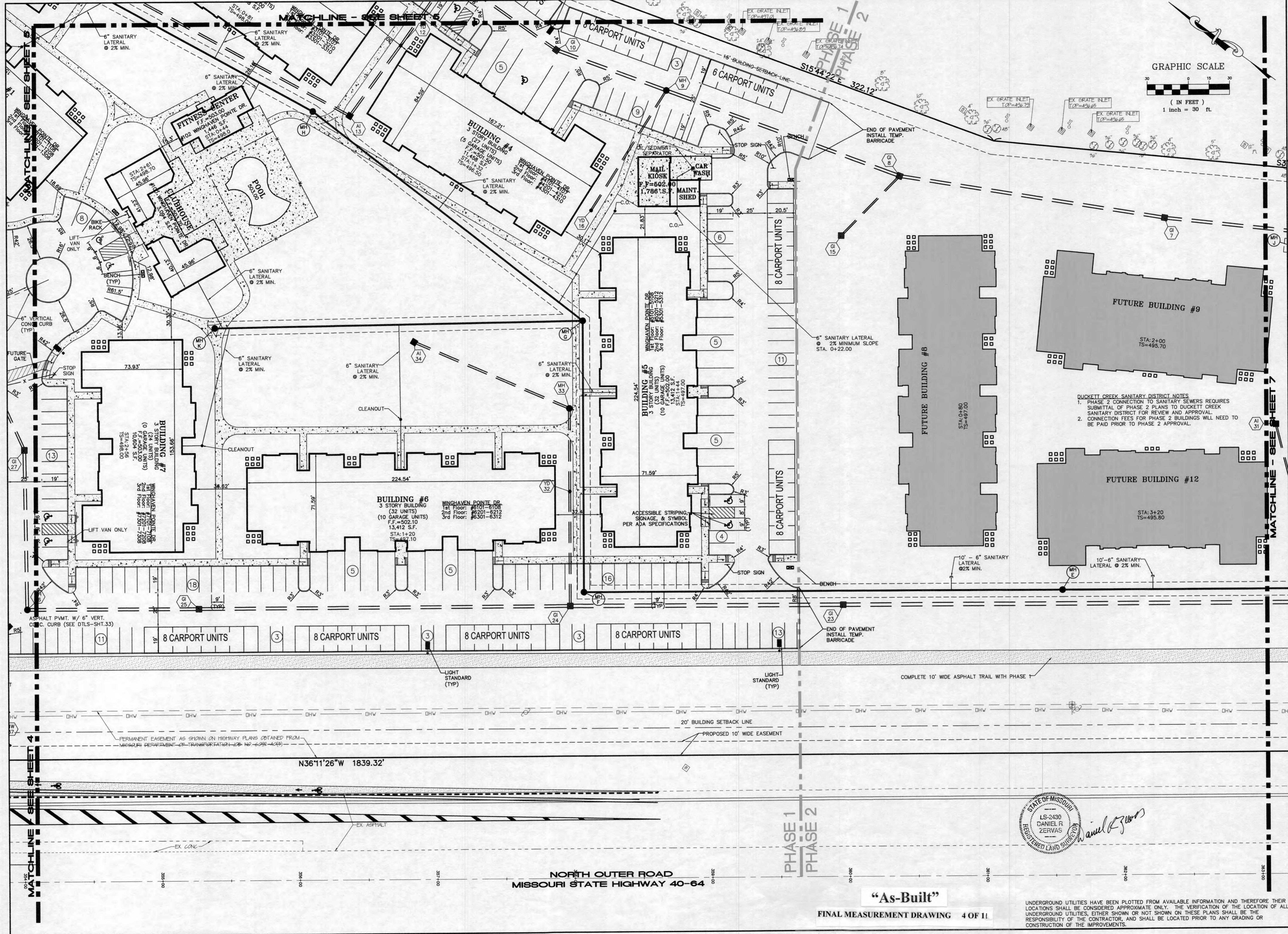
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05/16/2016	CITY REVIEW	
06/15/2016	CITY REVIEW & DCSD	COMMENTS
07/29/2016	CITY REVIEW	

Developer / Owner:  
**ROLWES DEVELOPMENT, L.L.C.**  
13100 MANCHESTER ROAD, SUITE 65  
ST. LOUIS, MISSOURI 63131  
314-821-9600

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Page No. 5 of 38

**SITE PLAN**





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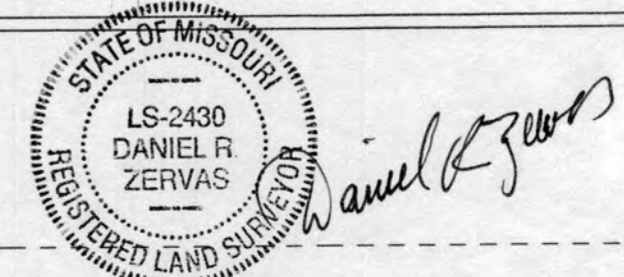
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DUCKETT CREEK SANITARY DISTRICT NOTES  
1. PHASE 2 CONNECTION TO SANITARY SEWERS REQUIRES SUBMITTAL OF PHASE 2 PLANS TO DUCKETT CREEK SANITARY DISTRICT FOR REVIEW AND APPROVAL.  
2. CONNECTION FEES FOR PHASE 2 BUILDINGS WILL NEED TO BE PAID PRIOR TO PHASE 2 APPROVAL.

Developer / Owner:  
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"As-Built"  
FINAL MEASUREMENT DRAWING 4 OF 11

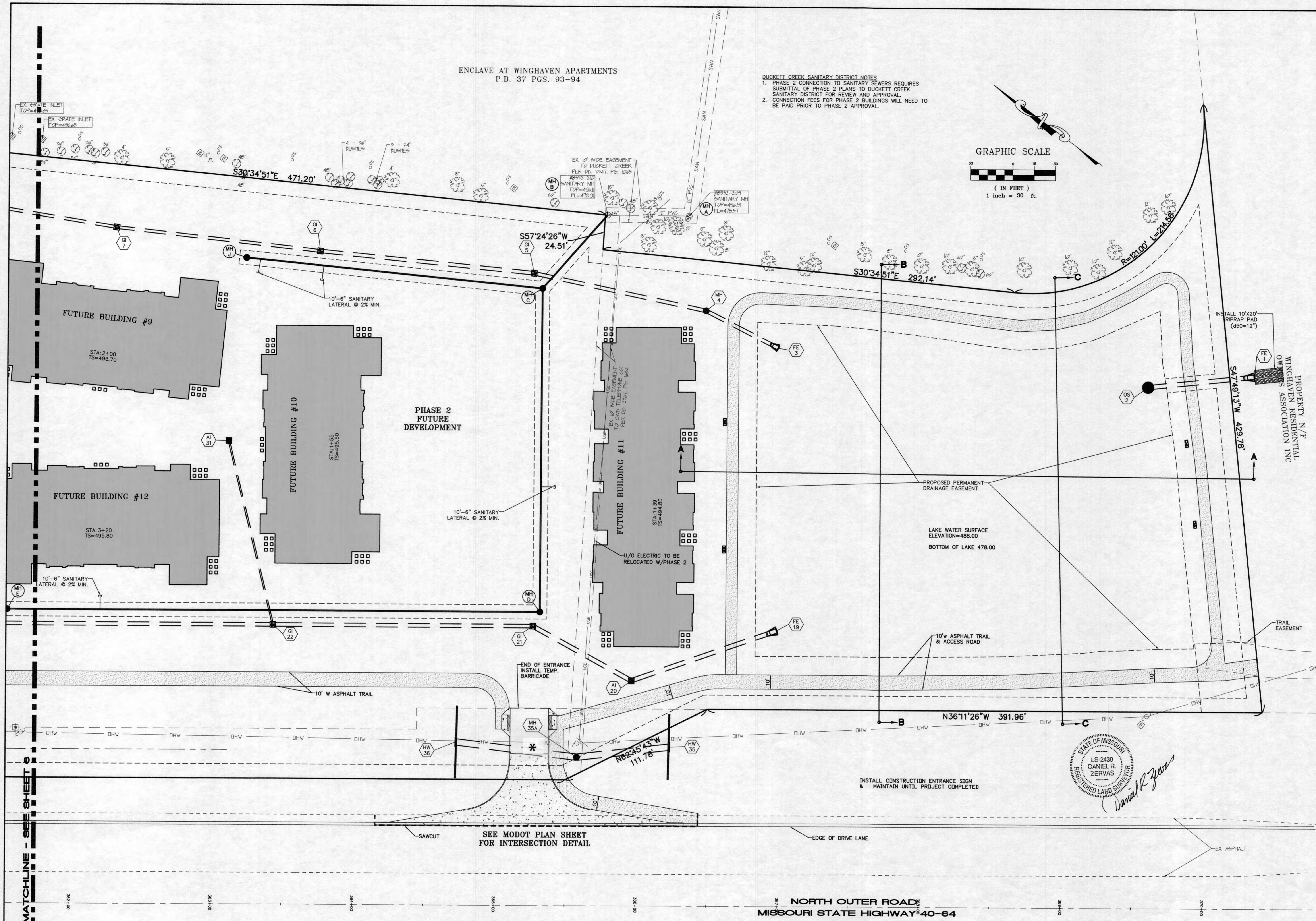
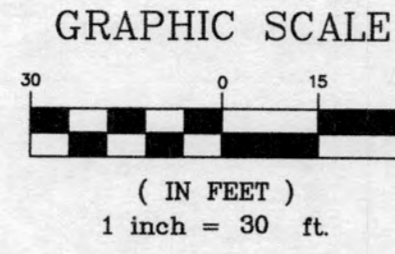
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SITE PLAN

Bax Project # 14-16403 Issue Date: 03/18/2016

ENCLAVE AT WINGHAVEN APARTMENTS  
P.B. 37 PGS. 93-94

DUCKETT CREEK SANITARY DISTRICT NOTES  
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ENGINEERING  
PLANNING  
SURVEYING  
221 Point West Blvd.  
St. Charles, MO 63301  
636-928-5502  
FAX 636-928-1718



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05/16/2016	CITY REVIEW & DCSD COMMENTS
06/15/2016	CITY REVIEW
07/29/2016	CITY REVIEW

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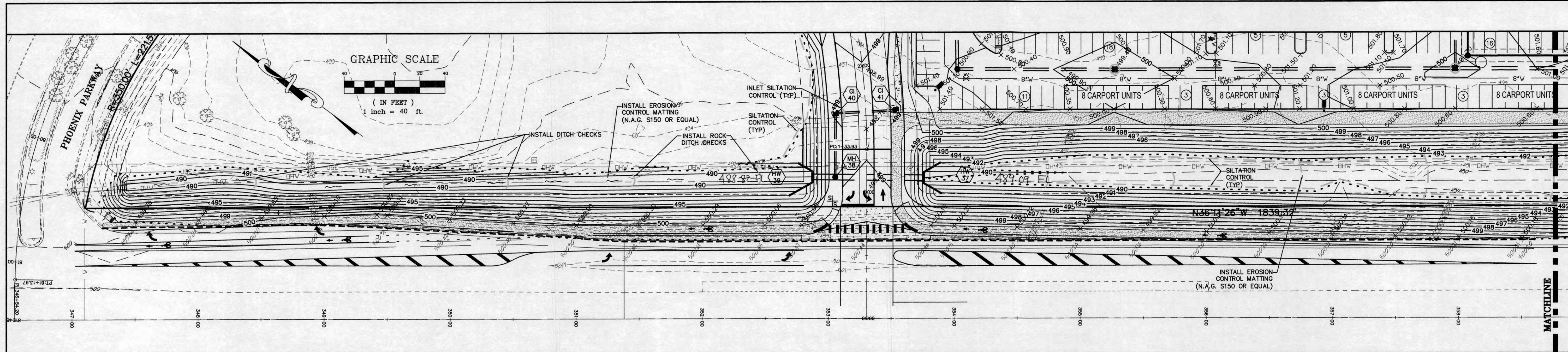
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**7 of 38**

"As-Built"  
FINAL MEASUREMENT DRAWING 5 OF 11

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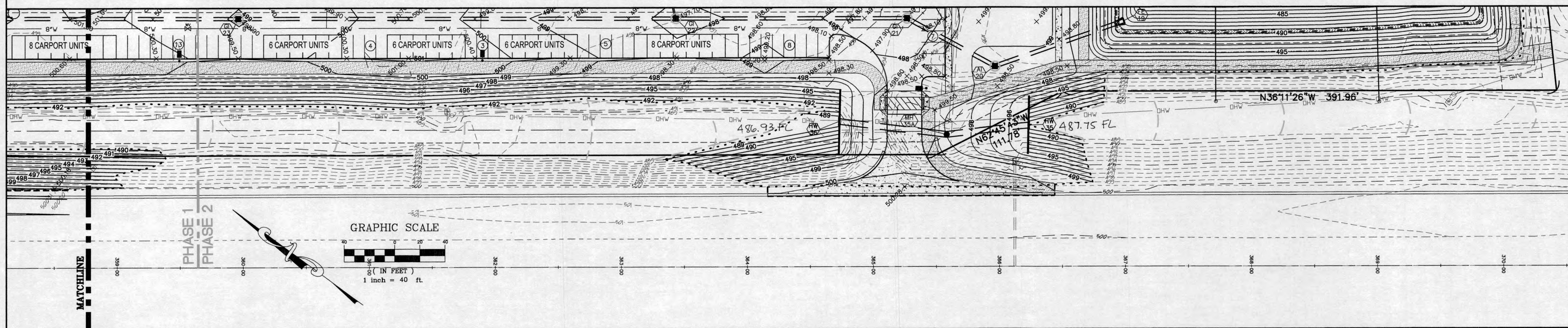
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Box Project # 14-16403 Issue Date: 03/18/2016



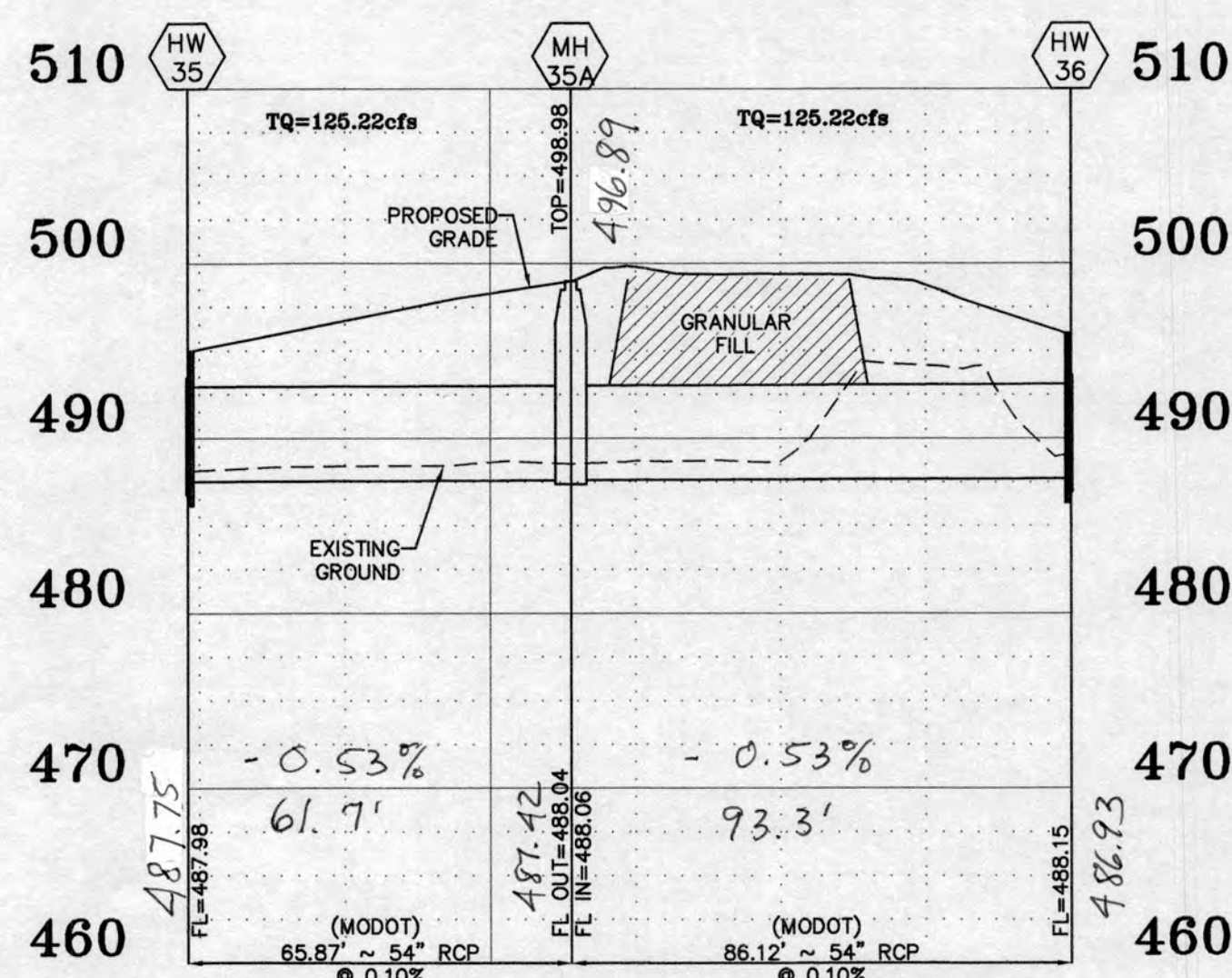
**ROAD WIDENING GRADING & EROSION CONTROL DETAIL**

SCALE: 1" = 40'



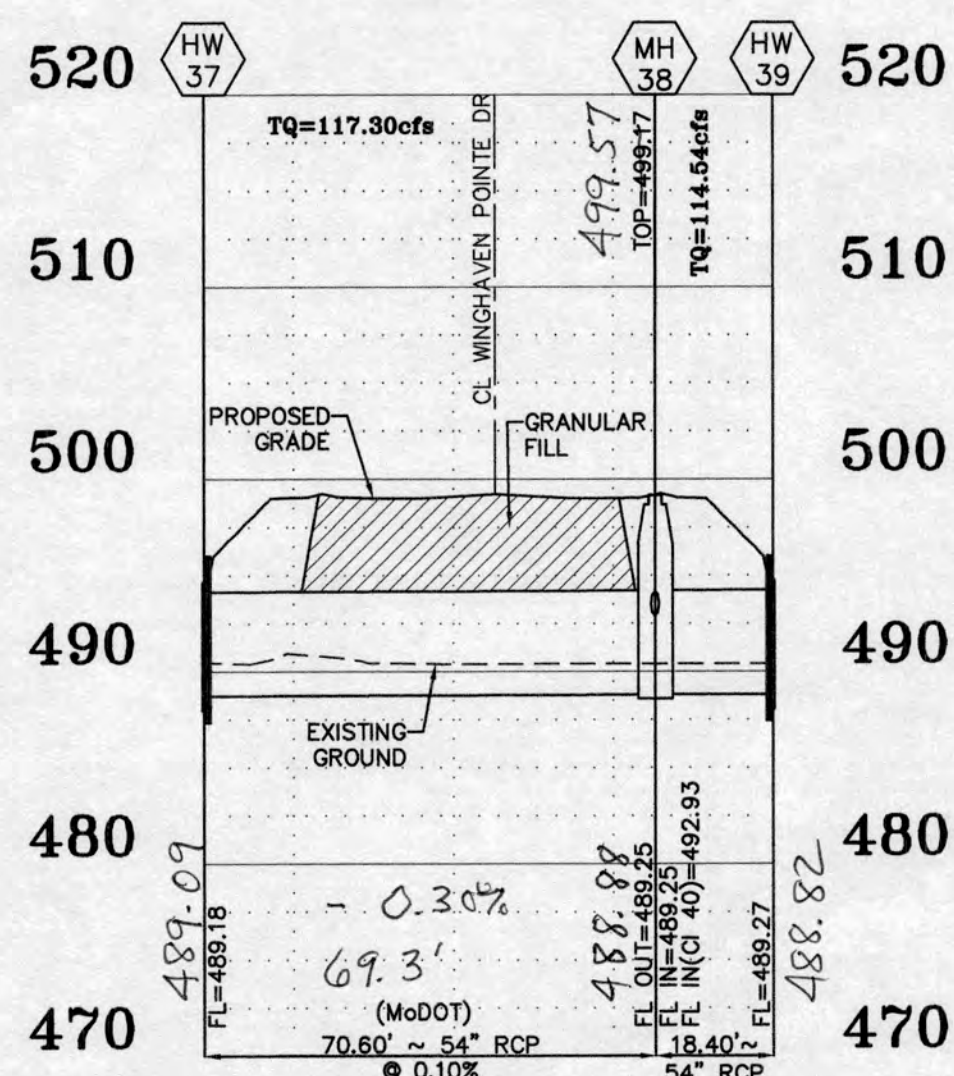
**ROAD WIDENING GRADING & EROSION CONTROL DETAIL**

SCALE: 1" = 40'



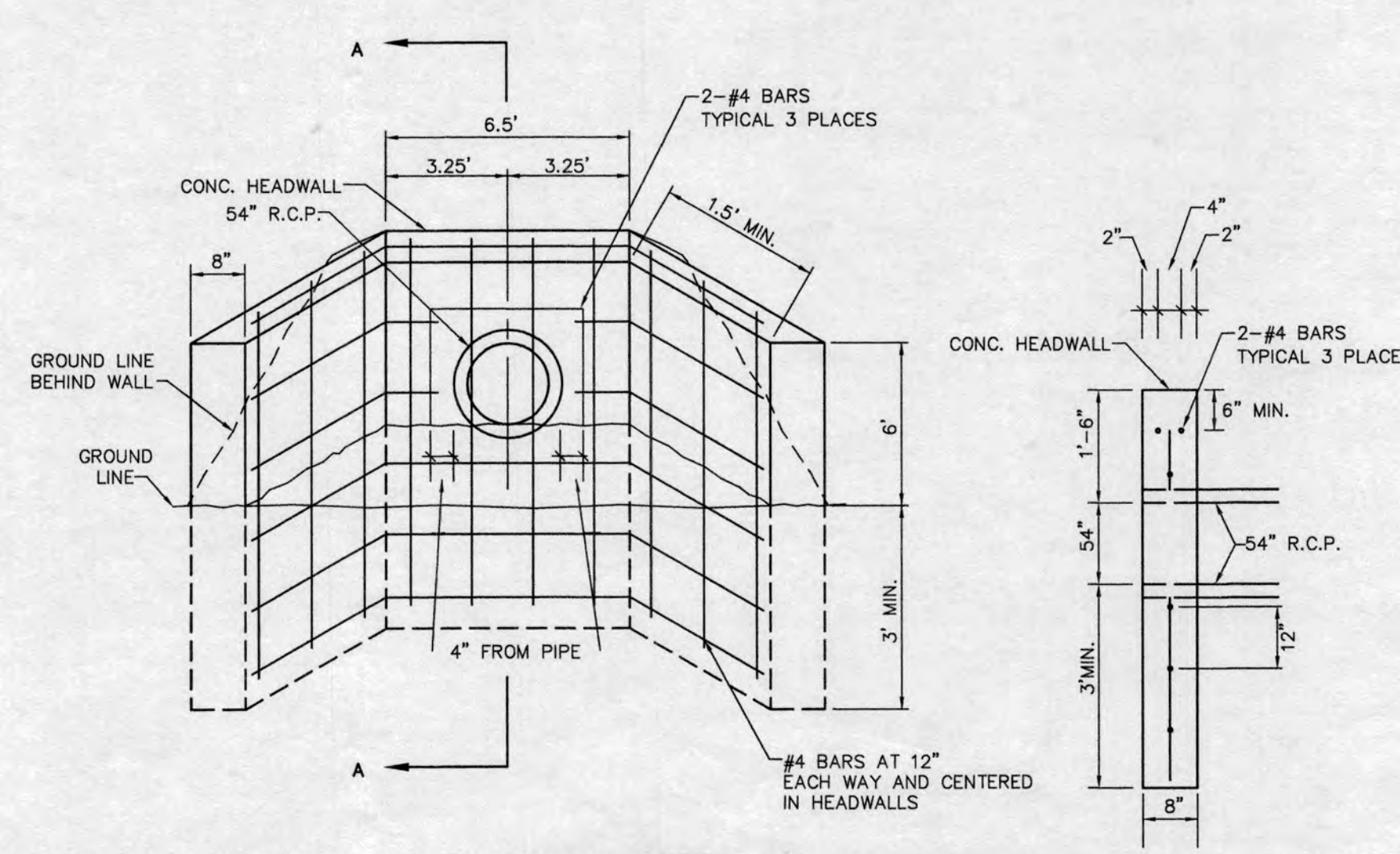
**STORM SEWER PROFILES**

SCALES:  
HORIZ. 1"=30'  
VERT. 1"=10'



**STORM SEWER PROFILES**

SCALES:  
HORIZ. 1"=30'  
VERT. 1"=10'



**CONCRETE HEADWALL DETAIL**  
NOT TO SCALE "As-Built"

FINAL MEASUREMENT DRAWING 6 OF 11

Revised 8.22.19

PROJECT TITLE:

WINGHAVEN POINTE

Box Project 14-16403 Issue Date: 08/19/2016

ENGINEERING  
DRAWING  
SURVEYING  
221 Park West Blvd.  
St. Charles, MO 63301  
636-625-6562  
FAX 636-625-1718



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CLIFFORD L. HEITMANN  
CIVIL ENGINEER  
E229817  
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REVISIONS

DATE	BY	REVISION
04/25/2016	DCSD & PHS02	COMMENTS
05/16/2016	CITY REVIEW	
06/15/2016	CITY REVIEW & DCSD	COMMENTS
07/29/2016	CITY REVIEW	
08/04/2016	MODOT REVIEW	
11/04/2016	PH1 GRADING REVISION	PER CLIENT

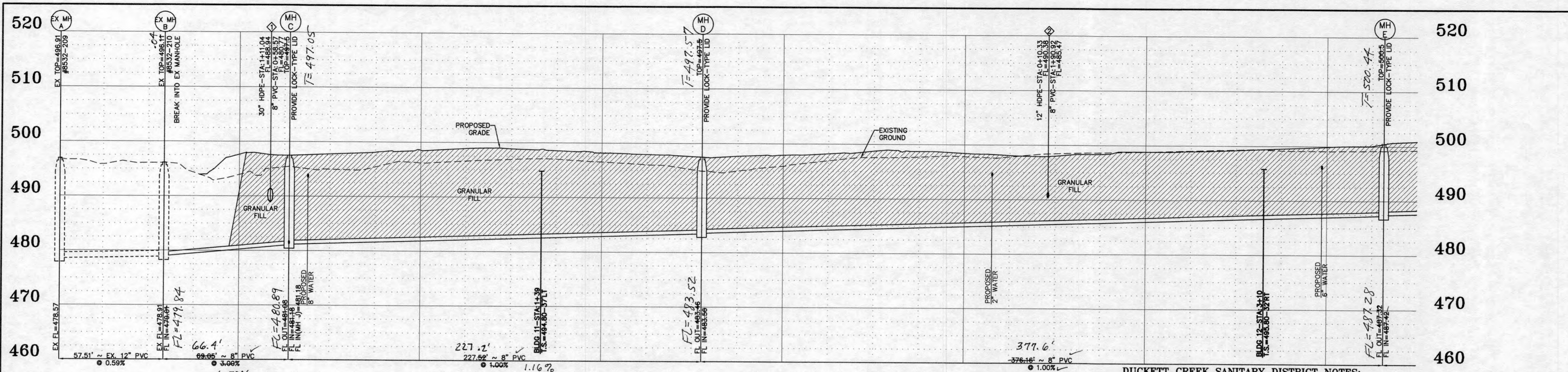
Developer / Owner:

ROLWES DEVELOPMENT, L.L.C.  
13100 MANCHESTER ROAD, SUITE 65  
ST. LOUIS, MISSOURI 63131  
314-821-9600

MODOT GRADING PLAN

P+Z No. #9831.65.02  
City No. #

Page No. 20.1 of 38

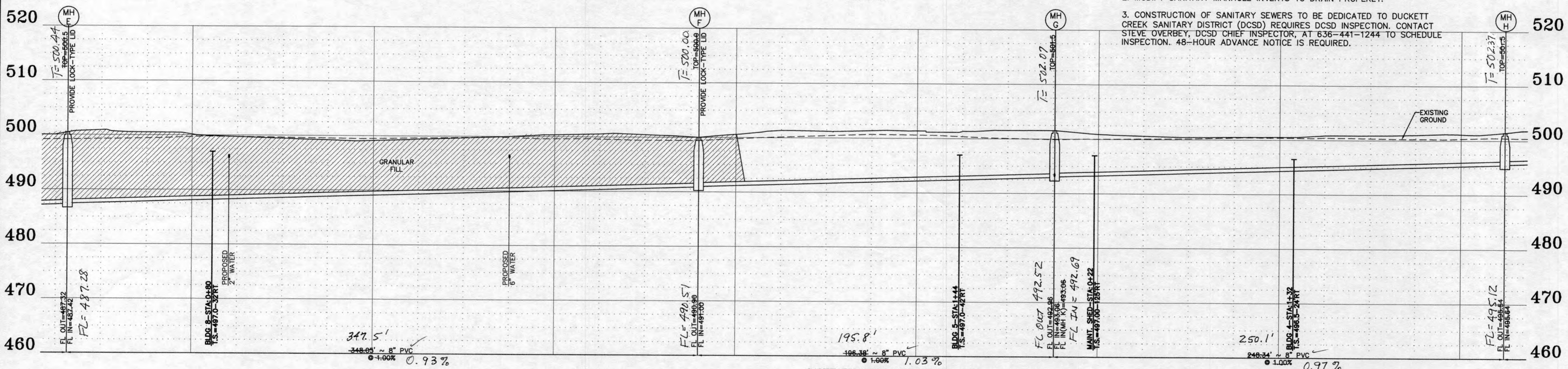


**SANITARY SEWER PROFILES**

SCALES:  
HORIZ. 1"=30'  
VERT. 1"=10'

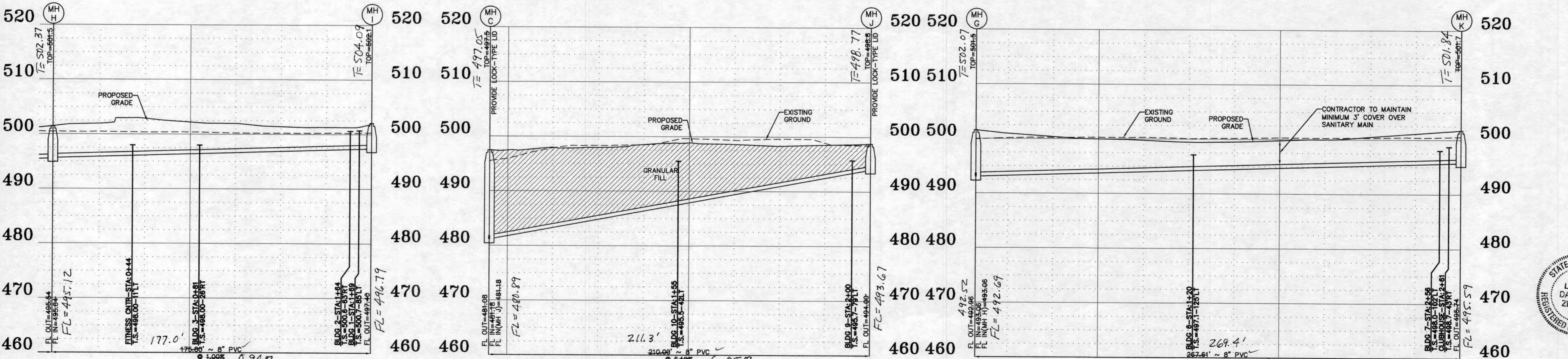
**DUCKETT CREEK SANITARY DISTRICT NOTES:**

- EXISTING SANITARY SEWER SERVICE SHALL NOT BE INTERRUPTED.
- MODIFY SANITARY MANHOLE INVERTS TO DRAIN PROPERLY.
- CONSTRUCTION OF SANITARY SEWERS TO BE DEDICATED TO DUCKETT CREEK SANITARY DISTRICT (DCSD) REQUIRES DCSD INSPECTION. CONTACT STEVE OVERBEY, DCSD CHIEF INSPECTOR, AT 636-441-1244 TO SCHEDULE INSPECTION. 48-HOUR ADVANCE NOTICE IS REQUIRED.



**SANITARY SEWER PROFILES**

SCALES:  
HORIZ. 1"=30'  
VERT. 1"=10'



**SANITARY SEWER PROFILES**

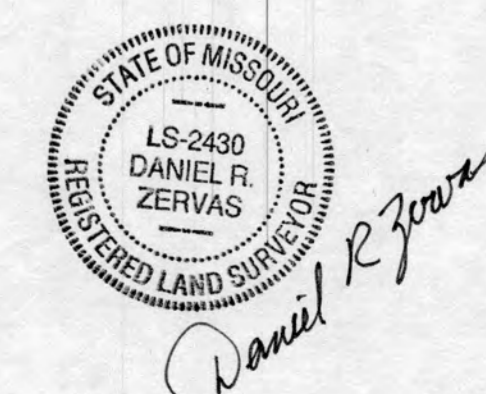
SCALES:  
HORIZ. 1"=30'  
VERT. 1"=10'

**SANITARY SEWER PROFILES**

SCALES:  
HORIZ. 1"=30'  
VERT. 1"=10'

**SANITARY SEWER PROFILES**

SCALES:  
HORIZ. 1"=30'  
VERT. 1"=10'



**"As-Built"**

**PROJECT TITLE:**  
**WINGHAVEN POINTE**

**ENGINEERING PLANNING SURVEYING**  
221 Point West Blvd.  
St. Charles, MO 63301  
636-928-5552  
FAX 636-928-1718

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CLIFFORD L. HEITMANN  
CIVIL ENGINEER  
E29817  
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**REVISIONS**

Date	By	Comments
04/25/2016	DCSD & PWS02	COMMENTS
05/16/2016	CITY REVIEW	
06/15/2016	CITY REVIEW & DCSD	COMMENTS
07/29/2016	CITY REVIEW	

**Developer / Owner:**  
ROLWES DEVELOPMENT, L.L.C.  
13100 MANCHESTER ROAD, SUITE 65  
ST. LOUIS, MISSOURI 63131  
314-821-9600

**SANITARY SEWER PROFILES**

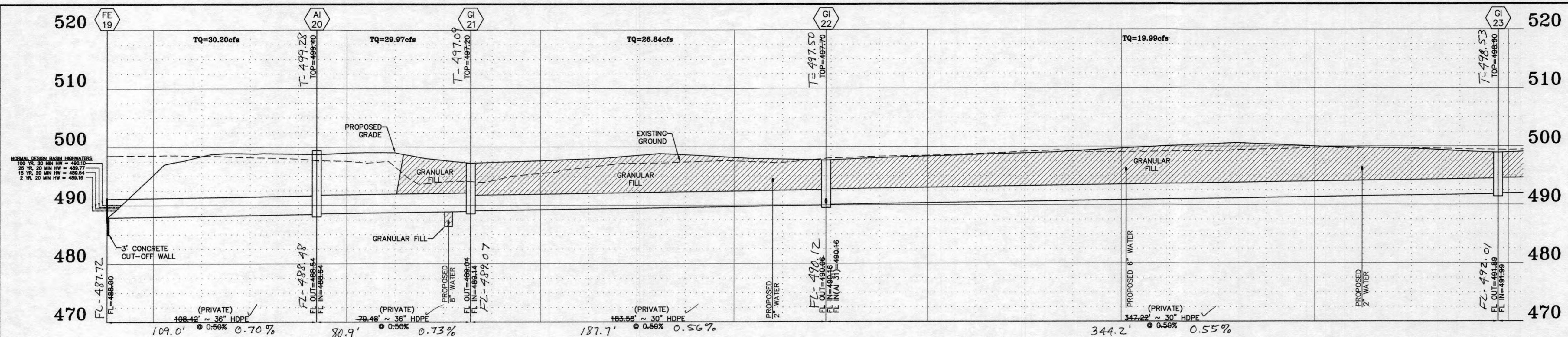
**P+Z No.**  
#9831.65.02

**City No.**  
#

**Page No.**  
21 of 38

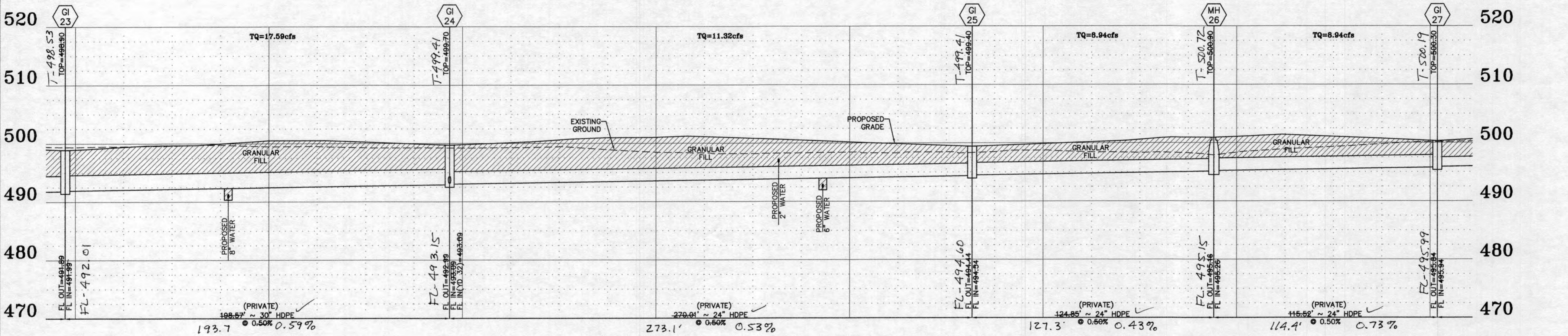






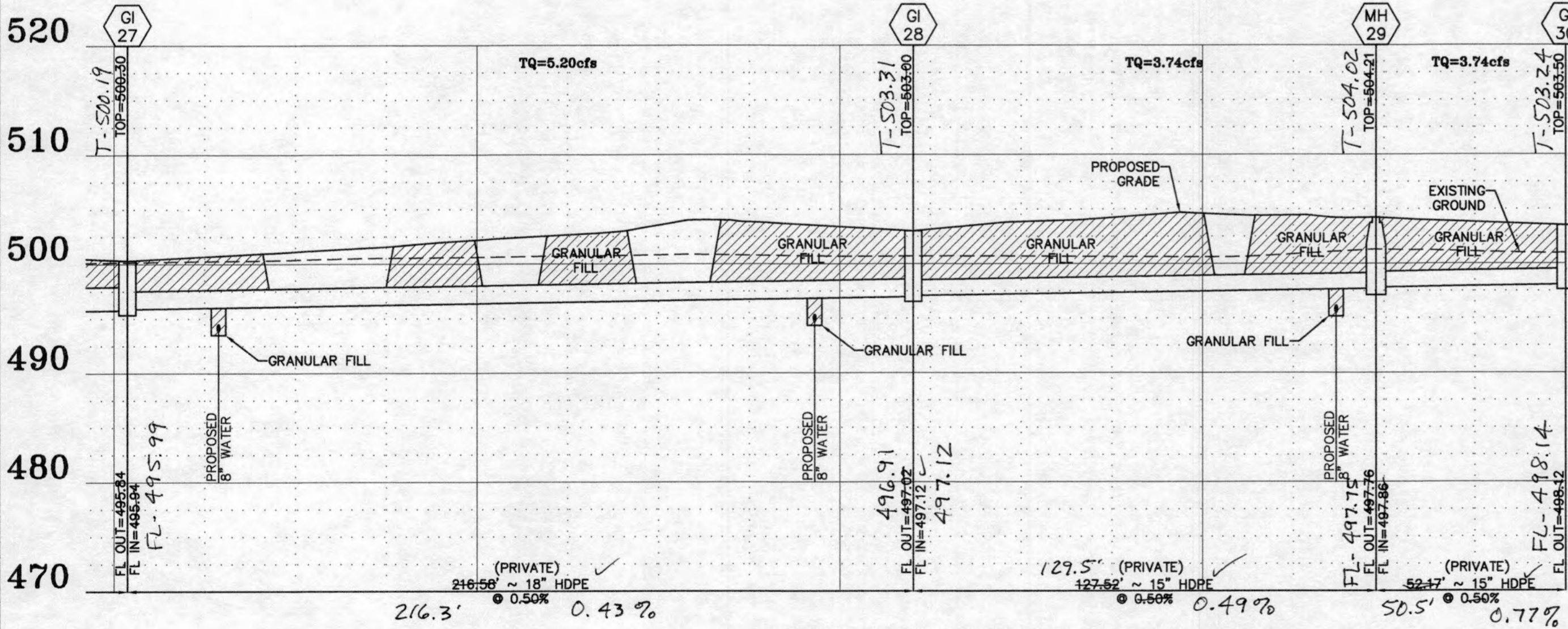
STORM SEWER PROFILES

SCALES:  
HORIZ. 1"=30'  
VERT. 1"=10'



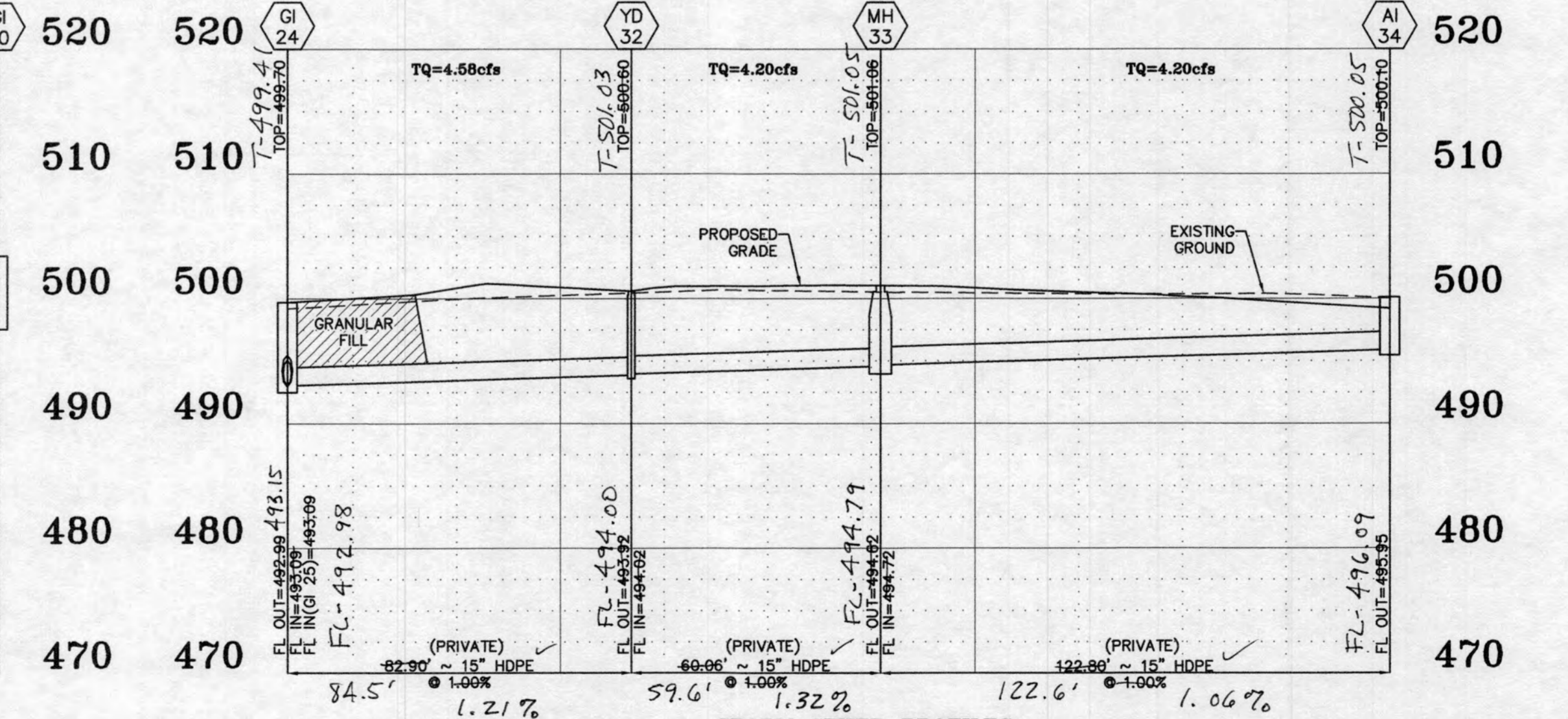
STORM SEWER PROFILES

SCALES:  
HORIZ. 1"=30'  
VERT. 1"=10'



STORM SEWER PROFILES

SCALES:  
HORIZ. 1"=30'  
VERT. 1"=10'



STORM SEWER PROFILES

SCALES:  
HORIZ. 1"=30'  
VERT. 1"=10'

"As-Built"

FINAL MEASUREMENT DRAWING 9 OF 10

NOTE: ALL STORM INLETS TO HAVE FILTERTEX FILLER OR EQUAL. SEE DETAIL ON SHEET 38.

STATE OF MISSOURI  
REGISTERED LAND SURVEYOR  
LS-2430  
DANIEL R. ZERVAS  
*Daniel R. Zervas*

PROJECT TITLE:  
**WINGHAVEN POINTE**

ENGINEERING  
PLANNING  
SURVEYING  
261 Point West Blvd.  
St. Charles, MO 63301  
636-926-8662  
FAX 636-926-1718



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CIVIL ENGINEER  
E29817  
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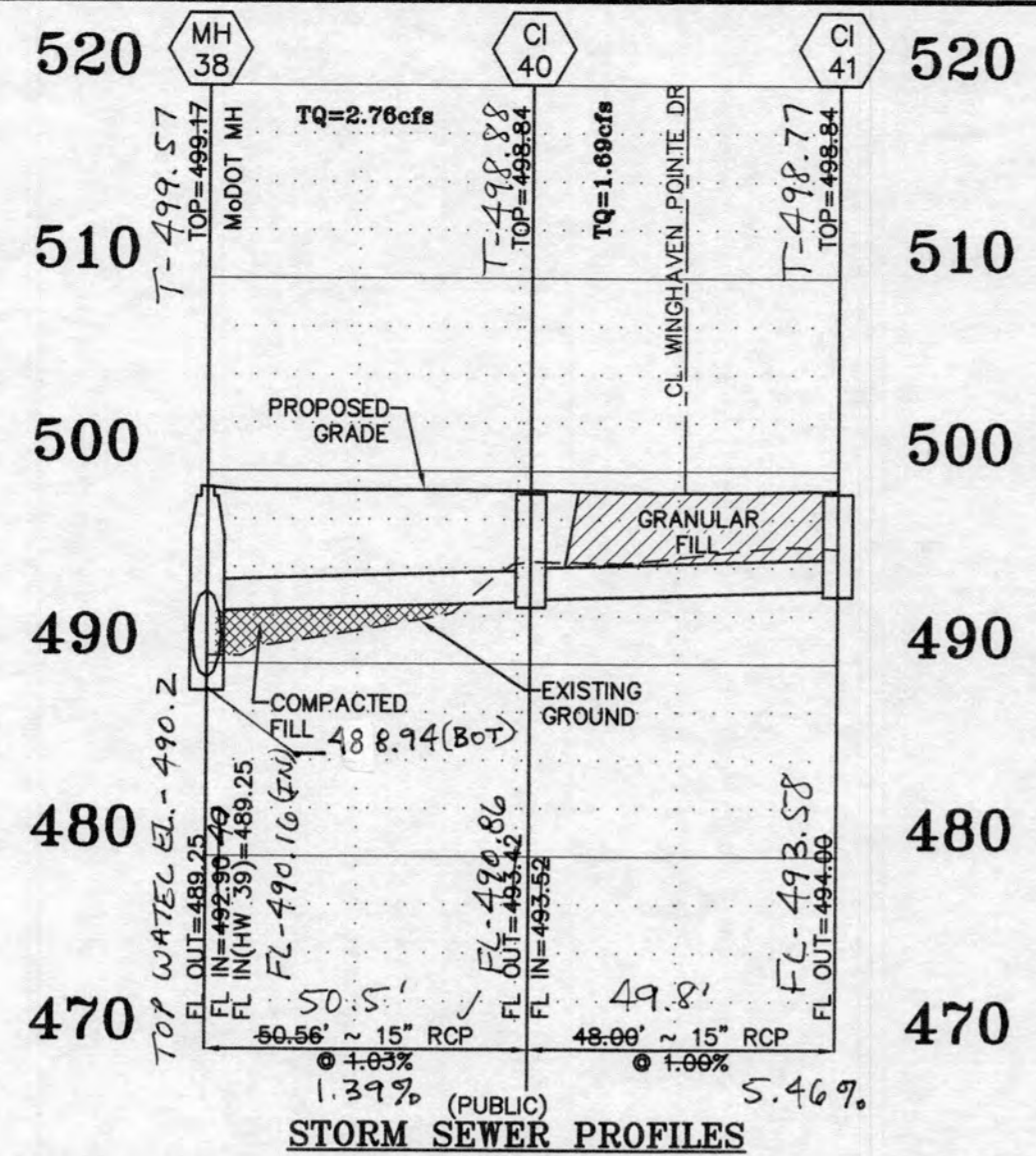
REVISIONS	DATE	BY	COMMENTS
	04/25/2016	DCSD & PWS02	
	05/16/2016	CITY REVIEW	
	06/15/2016	CITY REVIEW & DCSD	
	07/29/2016	CITY REVIEW	

Developer / Owner:  
ROLWES DEVELOPMENT, L.L.C.  
13100 MANCHESTER ROAD, SUITE 65  
ST. LOUIS, MISSOURI 63131  
314-821-9600

STORM SEWER PROFILES

P+Z No. #9831.65.02  
City No. #

Page No. 23 of 38



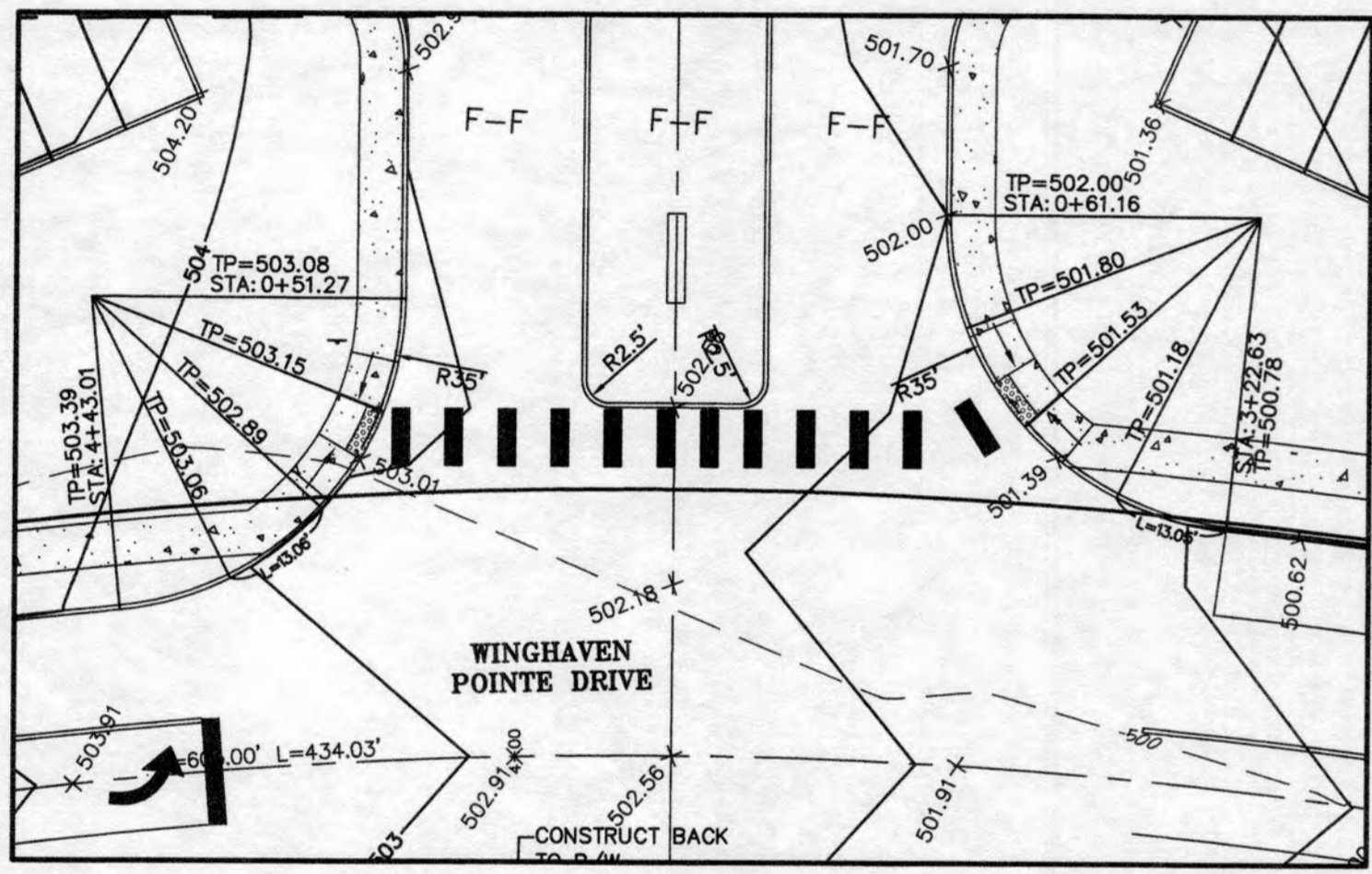
**STORM SEWER PROFILES**  
 SCALES:  
 HORIZ. 1"=30'  
 VERT. 1"=10'

BAX PROJECT NAME : WINGHAVEN POINTE  
 BAX PROJECT NO. : 14-16403  
 DESIGN DATE : 06/27/2016

FILENAME: 16403

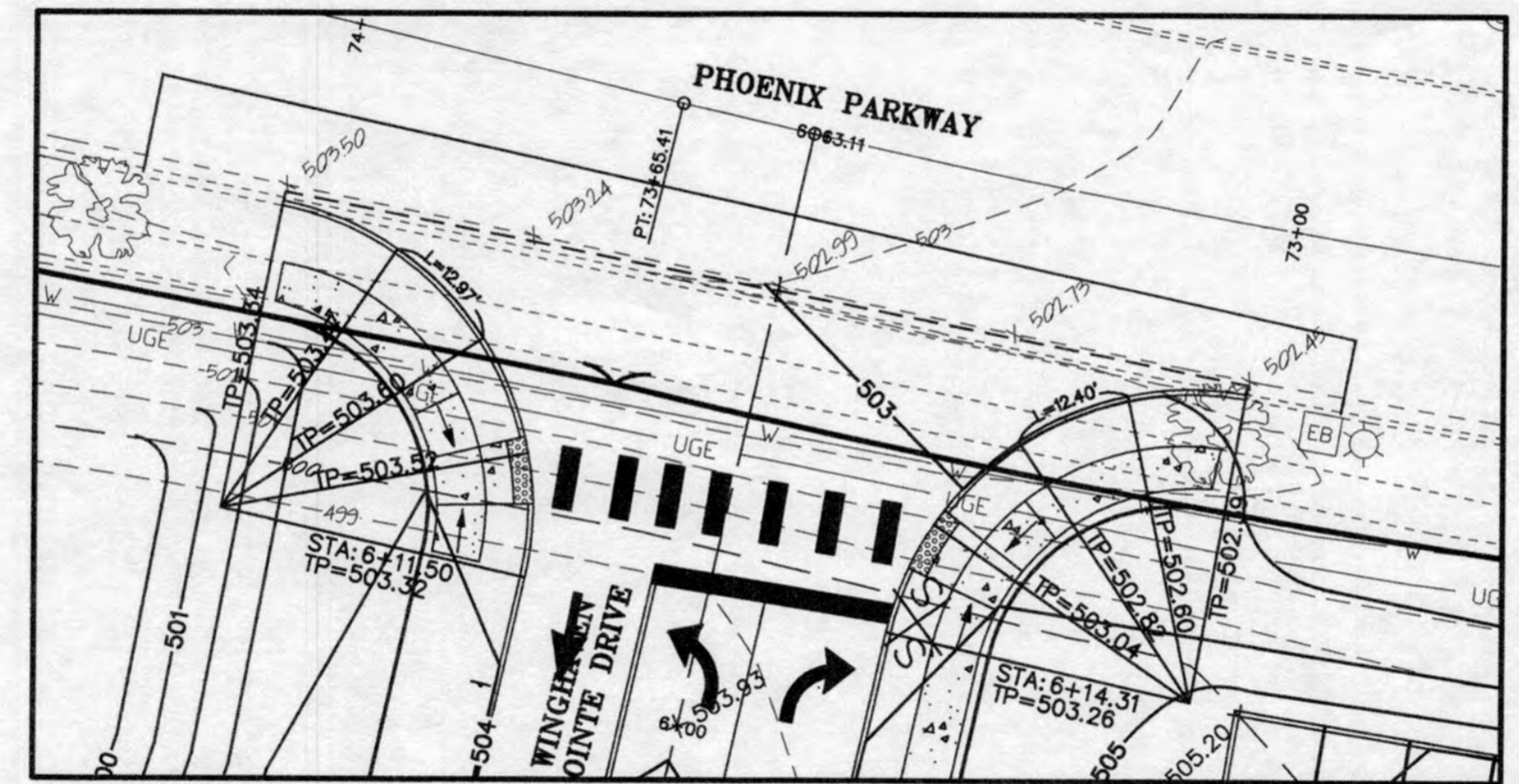
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C141	C140	48	15	494.00	493.52	1.00	498.84	4.01	494.83	494.77	.00070	0.03	1.38	0.03	0.03	0.00	0.00	0.00	LOW	3.40	0.52	2.86	1.69	1.69	6.46	1
C140	MH38	49	15	493.42	492.90	1.05	498.84	4.51	494.33	494.15	.00180	0.09	2.25	0.08	0.07	0.02	0.00	0.00	LOW	3.40	0.33	2.86	1.07	2.76	6.62	2
MH39	MH38	18	54	489.27	489.25	0.11	499.00	4.38	494.62	493.75	.00340	0.06	7.20	0.81	0.81	0.00	0.00	0.00	MH	0.00	4.61	3.85	%114.54	114.54	64.82	3
MH38	MH37	71	54	489.25	489.18	0.10	499.17	5.42	493.75*	492.09	.00360	0.25	7.38	0.84	0.05	0.06	0.00	0.00	MH	0.00	0.00	0.00	117.30	61.92	4	
MH36	MH35A	86	54	488.15	488.06	0.10	499.50	5.63	493.87	492.56	.00410	0.35	7.87	0.96	0.96	0.00	0.00	0.00	MH	0.00	3.23	2.85	7.92	125.22	63.57	5
MH35A	MH35	66	54	488.04	487.98	0.09	498.98	6.44	492.54*	491.04	.00410	0.27	7.87	0.96	0.00	0.00	0.00	0.00	MH	0.00	0.00	0.00	125.22	59.35	6	
A134	MH33	123	15	495.95	494.72	1.00	500.10	3.42	496.68*	495.97	.00420	0.52	3.42	0.18	0.18	0.00	0.00	4S	11.00	1.70	2.86	4.20	4.20	6.47	7	
MH33	YD32	60	15	494.62	494.02	1.00	501.06	5.15	495.91	495.44	.00420	0.25	3.42	0.18	0.11	0.11	0.00	0.00	MH	0.00	0.00	0.00	0.00	6.46	8	
YD32	G124	83	15	493.92	493.09	1.00	500.60	5.16	495.44	494.97	.00500	0.42	3.73	0.22	0.05	0.00	0.00	0.00	YD	0.00	0.13	2.86	0.38	4.58	6.46	9
A131	G122	133	12	493.00	490.16	2.14	496.90	2.77	494.13	492.93	.00730	0.97	3.88	0.23	0.23	0.00	0.00	0.00	4S	11.00	1.04	2.86	3.05	3.05	5.21	10
G130	MH29	52	15	498.12	497.86	0.50	503.50	4.35	499.15	499.11	.00040	0.02	1.02	0.02	0.02	0.00	0.00	0.00	LOW	3.40	0.34	2.86	1.25	1.25	4.56	11
MH29	G128	128	15	497.76	497.12	0.50	504.21	5.77	498.44	498.37	.00040	0.05	1.02	0.02	0.01	0.01	0.00	0.00	MH	0.00	0.00	0.00	0.00	1.25	4.58	12
G128	G127	217	18	497.02	495.94	0.50	503.00	5.34	497.66*	497.44	.00070	0.14	1.53	0.04	0.03	0.00	0.00	0.00	LOW	3.40	0.42	2.86	1.46	2.71	7.42	13
G127	MH26	116	24	495.84	495.26	0.50	500.30	2.88	497.42	497.26	.00080	0.09	2.05	0.07	0.06	0.01	0.00	0.00	LOW	3.40	1.05	2.86	3.74	6.45	16.03	14
MH26	G125	125	24	495.16	494.54	0.50	500.90	4.16	496.74	496.54	.00080	0.10	2.05	0.07	0.05	0.05	0.00	0.00	MH	0.00	0.00	0.00	0.00	6.45	15.94	15
G125	G124	270	24	494.44	493.09	0.50	499.40	3.83	495.57	495.09	.00110	0.41	2.81	0.12	0.07	0.00	0.00	0.00	LOW	3.40	0.65	2.86	2.38	8.83	16.00	16
G124	G123	199	30	492.99	491.99	0.50	499.70	4.73	494.97	494.49	.00140	0.27	3.08	0.15	0.06	0.00	0.00	0.00	LOW	3.40	0.45	2.86	1.69	15.10	29.11	17
G123	G122	347	30	491.89	490.16	0.50	498.90	5.27	493.63	492.93	.00180	0.63	3.57	0.20	0.07	0.00	0.00	0.00	LOW	3.40	0.66	2.86	2.40	17.50	28.95	18
G122	G121	184	30	490.06	489.14	0.50	497.70	4.77	492.93	491.90	.00350	0.65	4.96	0.38	0.23	0.15	0.00	0.00	LOW	3.40	1.03	2.86	3.80	24.35	29.04	19
G121	A120	79	36	489.04	488.64	0.50	497.20	5.30	491.90	491.64	.00170	0.13	3.89	0.23	0.00	0.13	0.00	0.00	LOW	3.40	0.85	2.86	3.13	27.48	47.32	20
A120	FE19	108	36	488.54	488.00	0.50	499.40	7.98	491.42	491.00	.00170	0.19	3.92	0.24	0.12	0.11	0.00	0.00	4S	11.00	0.09	2.86	0.23	27.71	47.07	21
G118	G117	91	12	496.05	495.14	1.00	500.70	3.63	497.07	496.29	.00640	0.58	3.63	0.20	0.20	0.00	0.00	0.00	LOW	3.40	0.77	2.86	2.85	2.85	3.57	22
G117	MH11	108	15	495.05	493.97	1.00	501.20	4.91	496.29	495.93	.00340	0.36	3.06	0.14	0.00	0.00	0.00	0.00	LOW	3.40	0.24	2.86	0.90	3.75	6.47	23
YD16	MH9	102	12	495.90	494.88	1.00	499.90	3.72	496.18*	495.88	.00030	0.03	0.80	0.01	0.01	0.00	0.00	0.00	YD	0.00	0.21	2.86	0.63	0.63	3.55	24
G115	G18	60	12	495.40	494.80	0.99	499.40	3.02	496.38	495.80	.00630	0.38	3.60	0.20	0.20	0.00	0.00	0.00	LOW	3.40	0.77	2.86	2.83	2.83	3.55	25
A114	A113	190	15	495.74	494.79	0.50	501.90	4.97	496.93	496.57	.00150	0.29	2.07	0.07	0.07	0.00	0.00	0.00	4S	11.00	0.88	2.86	2.54	2.54	4.57	26
A113	YD12	63	15	494.69	494.38	0.49	501.20	4.63	496.57	496.19	.00330	0.21	3.04	0.14	0.12	0.05	0.00	0.00	4S	11.00	0.37	2.86	1.19	3.73	4.53	27
YD12	MH11	62	15	494.28	493.97	0.50	501.18	4.99	496.19	495.93	.00380	0.23	3.23	0.16	0.03	0.00	0.00	0.00	YD	0.00	0.08	2.86	0.23	3.96	4.55	28
MH11	G110	95	18	493.87	493.40	0.50	500.72	4.79	495.93	495.10	.00540	0.51	4.36	0.30	0.21	0.11	0.00	0.00	MH	0.00	0.00	0.00	0.00	7.71	7.41	29
G110	MH9	85	24	493.30	492.87	0.50	499.20	4.10	495.10	494.87	.00200	0.17	3.22	0.16	0.00	0.00	0.00	0.00	LOW	3.40	0.64	2.86	2.40	10.11	16.07	30
MH9	G18	181	24	492.77	491.87	0.50	500.28	5.92	494.36	493.91	.00230	0.41	3.42	0.18	0.03	0.01	0.00	0.00	MH	0.00	0.00	0.00	0.00	10.74	15.96	31
G18	G17	195	24	491.77	490.79	0.50	499.60	5.69	493.91	492.79	.00410	0.79	4.60	0.33	0.20	0.13	0.00	0.00	LOW	3.40	0.23	2.86	0.87	14.44	16.04	32
G17	G16	145	24	490.69	489.97	0.50	498.80	6.05	492.75	491.97	.00470	0.69	4.86	0.38	0.08	0.01	0.00	0.00	LOW	3.40	0.30	2.86	1.14	15.58	15.95	33
G16	G15	152	30	489.87	489.11	0.50	498.10	6.24	491.86	491.61	.00170	0.25	3.41	0.18	0.00	0.00	0.00	0.00	LOW	3.40	0.33	2.86	1.17	16.75	29.05	34
G15	MH4	124	30	489.01	488.39	0.50	497.20	5.92	491.28	490.89	.00220	0.28	3.95	0.24	0.10	0.10	0.00	0.00	LOW	3.40	0.71	2.86	2.65	19.40	28.97	35
MH4	FE3	57	30	488.29	488.00	0.51	498.15	7.44	490.71	490.50	.00220	0.13	3.95	0.24	0.04	0.04	0.00	0.00	MH	0.00	0.00	0.00	0.00	19.40	29.17	36
OS2	FE1	75	36	483.85	483.10	1.00	494.00	6.61	487.39	486.10	.00600	0.45	7.34	0.84	0.84	0.00	0.00	0.00	OS	0.00	2.26	2.86	4.74	51.85	66.59	37

\* INDICATES CRITICAL DEPTH



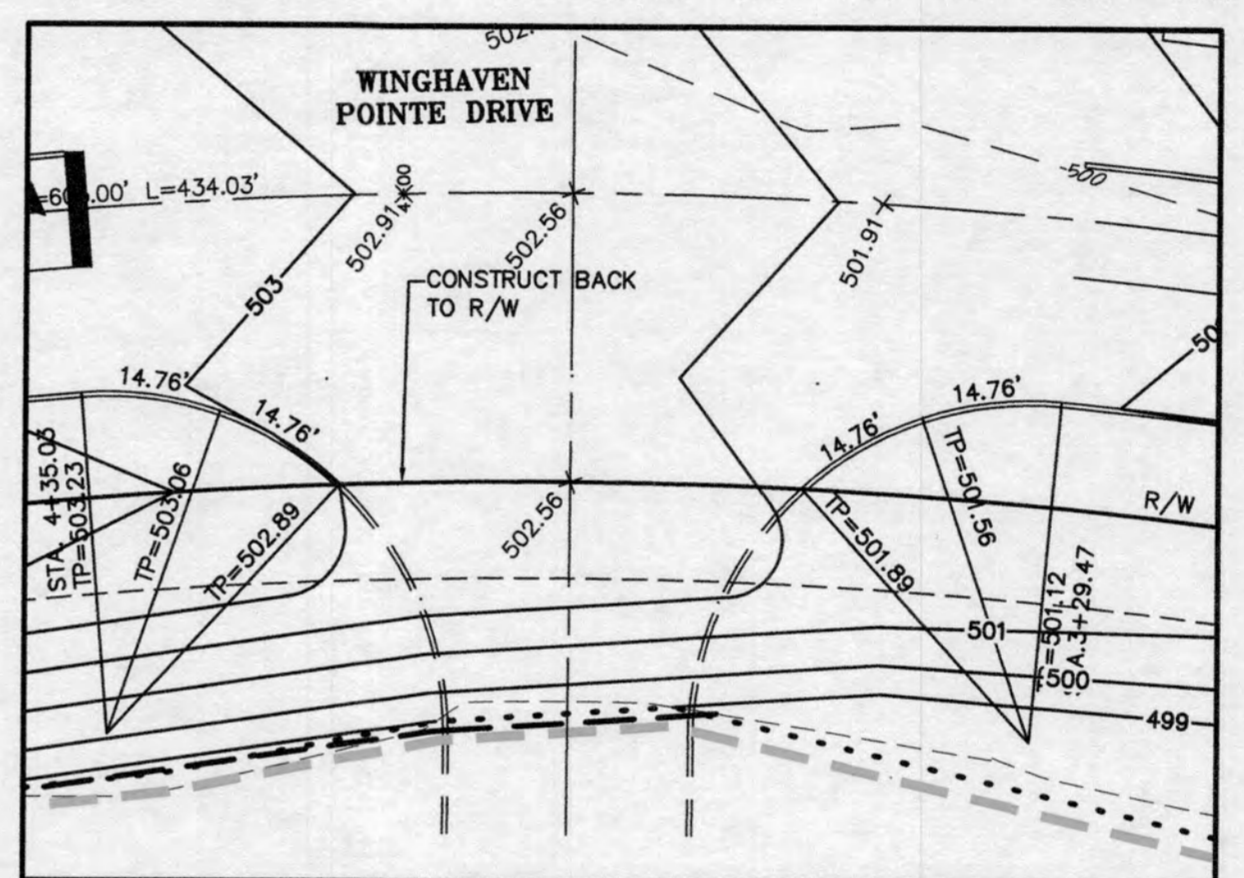
**INTERSECTION DETAIL**  
 SCALE: 1"=20'

NOTE:  
 ALL ELEVATIONS ARE TO TOP OF PAVEMENT UNLESS OTHERWISE NOTED.



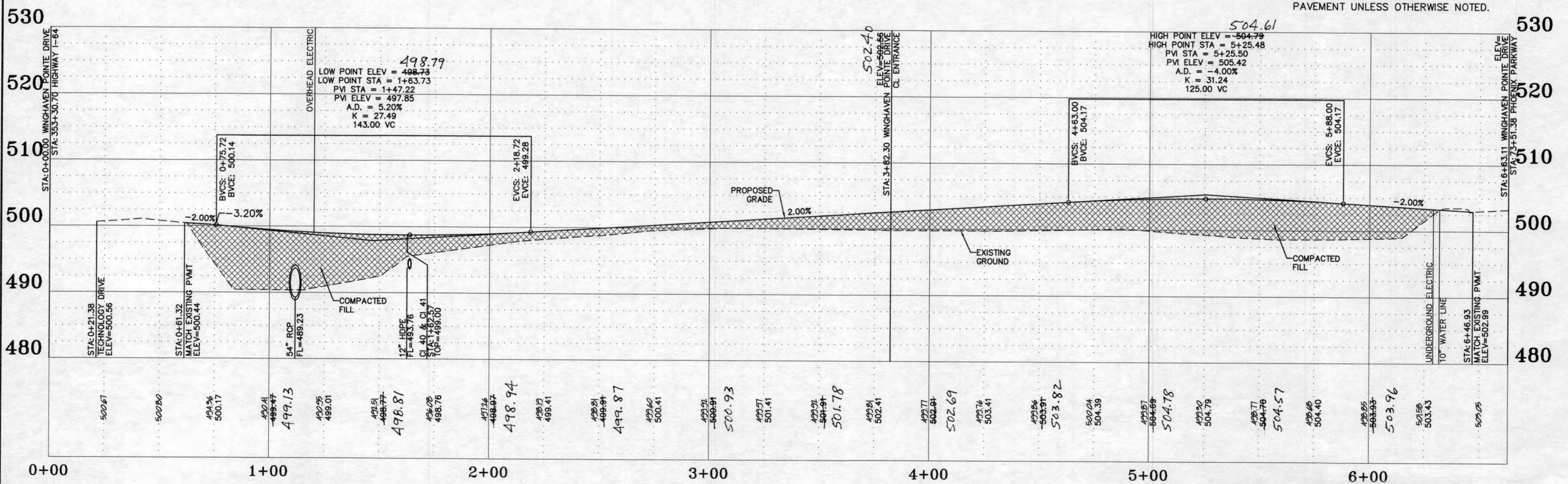
**INTERSECTION DETAIL**  
 SCALE: 1"=20'

NOTE:  
 ALL ELEVATIONS ARE TO TOP OF PAVEMENT UNLESS OTHERWISE NOTED.



**COMMERCIAL LOT INTERSECTION DETAIL**  
 SCALE: 1"=20'

NOTE:  
 ALL ELEVATIONS ARE TO TOP OF PAVEMENT UNLESS OTHERWISE NOTED.



**WINGHAVEN POINTE DRIVE**

SCALES:  
 HORIZ. 1"=30'  
 VERT. 1"=10'

**"As-Built"** Revised 8-22-19

NOTE: ALL STORM INLETS TO HAVE FILTREXX FILTER OR EQUAL. SEE DETAIL ON SHEET 38.

**PROJECT TITLE:**  
**WINGHAVEN POINTE**

**ENGINEERING PLANNING SURVEYING**

221 Point West Blvd.  
 St. Charles, MO 63301  
 636-928-5552  
 FAX 636-928-1718

CLIFFORD L. HEITMANN  
 CIVIL ENGINEER  
 E29817

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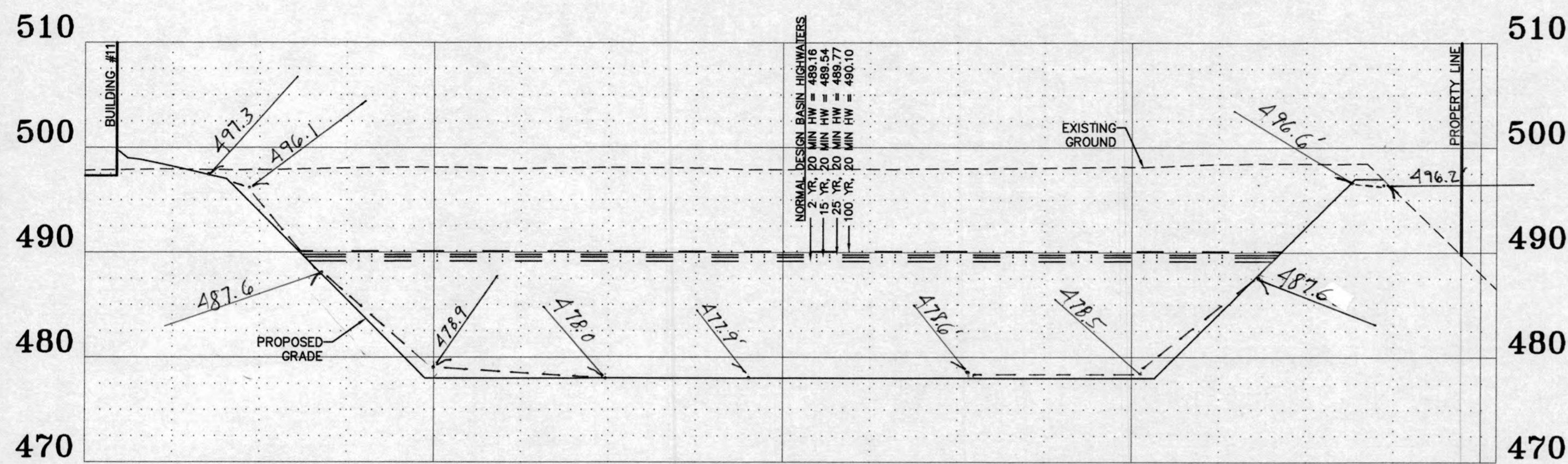
**REVISIONS**

04/25/2016	DCSD & PRSD2 COMMENTS
05/16/2016	CITY REVIEW
06/15/2016	CITY REVIEW & DCSD COMMENTS
07/29/2016	CITY REVIEW

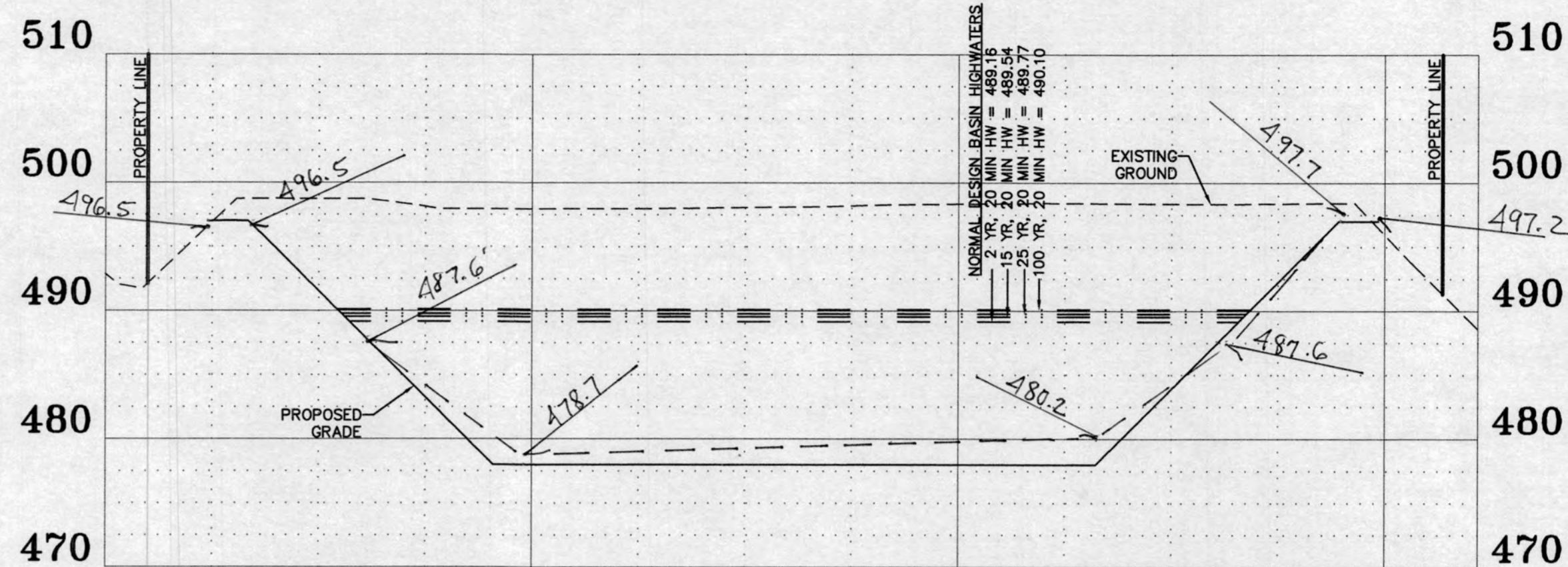
**Developer / Owner:**  
 ROLWES DEVELOPMENT, L.L.C.  
 13100 MANCHESTER ROAD, SUITE 65  
 ST. LOUIS, MISSOURI 63131  
 314-821-9600

**STORM SEWER PROFILES, HYDRAULICS AND STREET PROFILE**

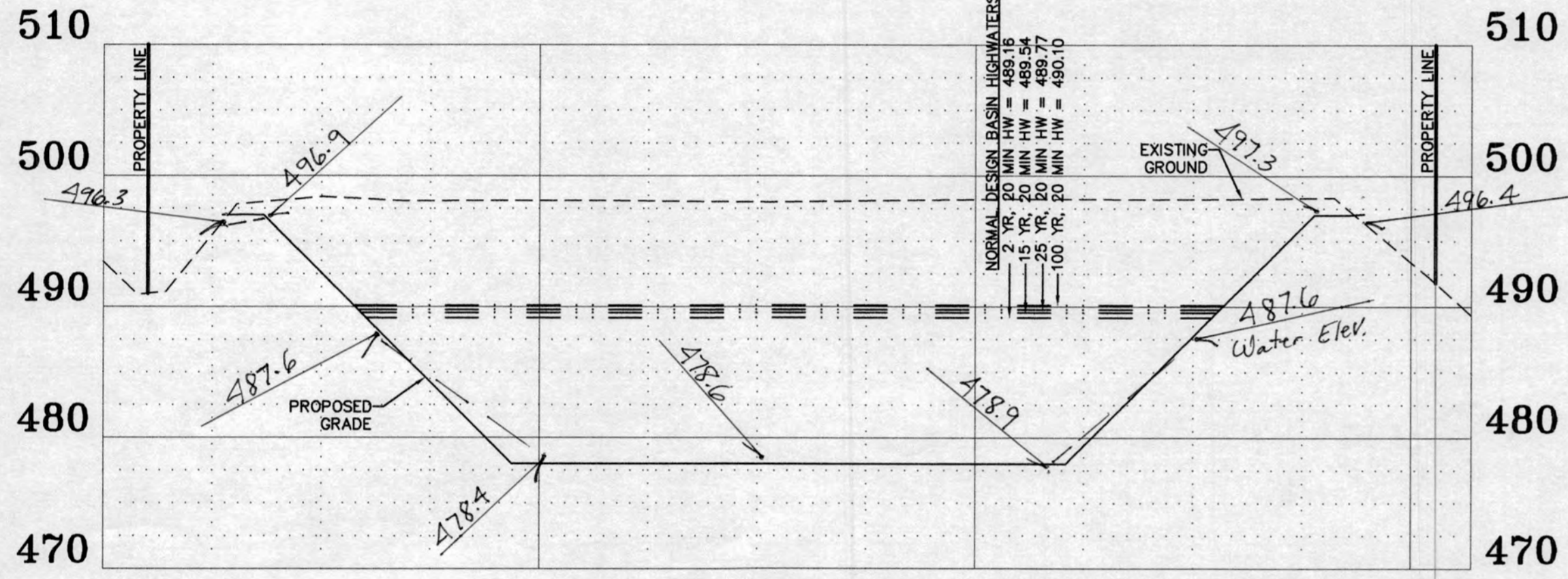
P+Z No. #9831.65.02  
 City No. #  
 Page No. 24 of



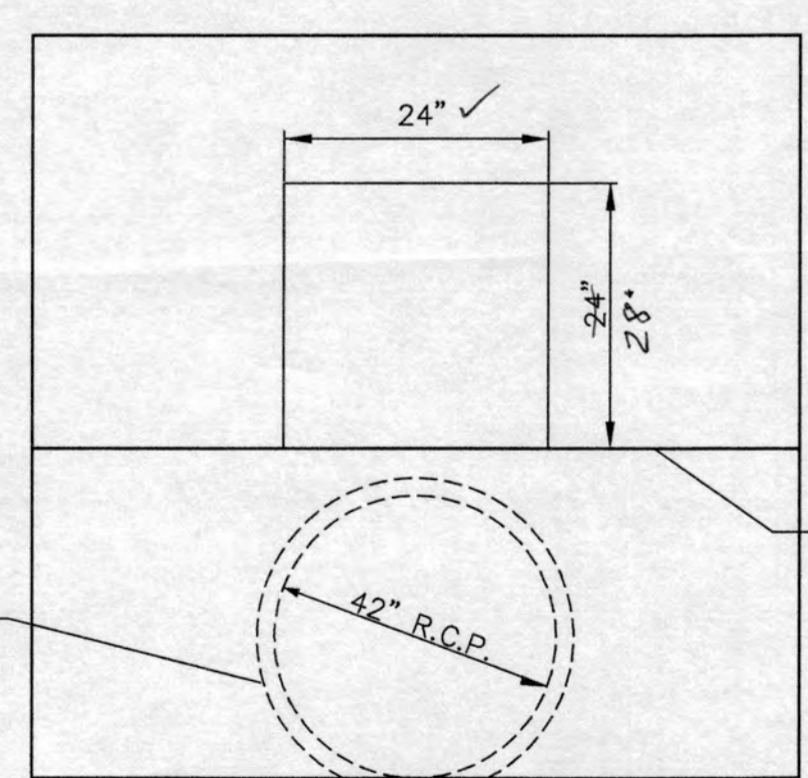
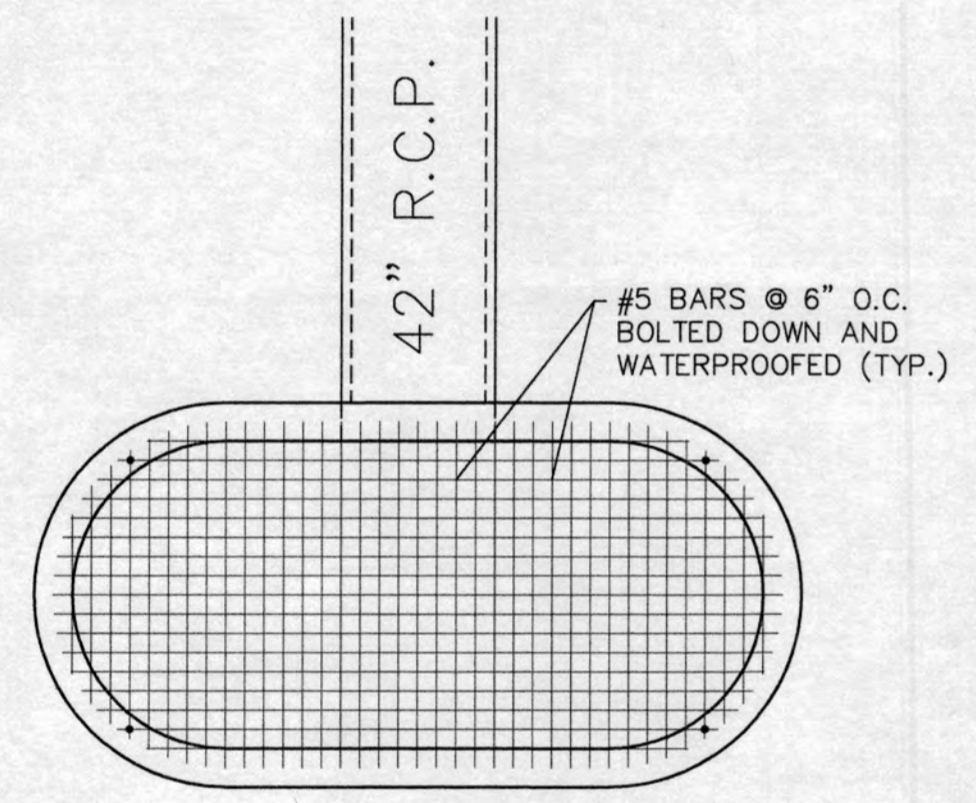
**BASIN SECTION A-A**  
 SCALES:  
 HORIZ. 1"=30'  
 VERT. 1"=10'



**BASIN SECTION B-B**  
 SCALES:  
 HORIZ. 1"=30'  
 VERT. 1"=10'



**BASIN SECTION C-C**  
 SCALES:  
 HORIZ. 1"=30'  
 VERT. 1"=10'



NORMAL DESIGN BASIN HIGHWATERS		FLOODED DESIGN BASIN HIGHWATERS	
2 YR, 20 MIN HW	= 489.16	2 YR, 20 MIN HW	= 489.20
15 YR, 20 MIN HW	= 489.54	15 YR, 20 MIN HW	= 489.61
25 YR, 20 MIN HW	= 489.57	25 YR, 20 MIN HW	= 489.61
100 YR, 20 MIN HW	= 490.10	100 YR, 20 MIN HW	= 490.23
100 YR, 20 MIN LFB HW	= 494.90	100 YR, 20 MIN LFB HW	= 495.33

**FLEXSTORM HD INLET FILTERS FOR USE IN CONCRETE STRUCTURES**  
 PRODUCT SELECTION AND SPECIFICATION DRAWING

Drop Through Opening Size Dia	Flexstorm Frame P/N
Small: 30.0" - 36.0"	62SHDR
Medium: 38.1" - 24.0"	62MHR
Large: 24.1" - 36.0"	62LHR

Drop Through Opening Size	Flexstorm Frame P/N
Up to 4" curb openings (1 Filter and Mounting Hardware)	62HDWM1
Between 4" and 8" curb openings (2 Filters and Mounting Hardware)	62HDWM2
Between 8" and 12" curb openings (3 Filters and Mounting Hardware)	62HDWM3
Between 12" and 16" curb openings (4 Filters and Mounting Hardware)	62HDWM4

Drop Through Opening Size	Flexstorm Frame P/N
Small: 12" x 12" up to 16" x 16" (or 64" max perimeter)	62SHD
Medium: 18" x 18" up to 24" x 24" (or 96" max perimeter)	62MHD
Large: 28" x 28" up to 36" x 36" (or 144" max perimeter)	62LHD
XL: 36" x 36" up to 48" x 48" (or 192" max perimeter) (2 pc set)	62XLHD

Nominal Bag Size Matched to Frame	Solids Storage (Cu Ft)				Filtered Flow Rate at 50% Max (CFS)				PC Oil Retention (Oz)		**PC+ Oil Retention (Oz)	
	FX	FXP	FXO	FXS	FX	PC	IL	ILS	(Oz)	(Oz)	(Oz)	(Oz)
Small	1.5	1.2	0.8	0.9	79	188	89					
Medium	2.1	1.7	1.2	1.3	115	204	89					
Large	3.8	2.7	1.8	1.9	173	262	89					
XL	4.2	3.6	2.4	2.6	230	319	178					

**3. CREATE YOUR FINAL PART NUMBER TO INCLUDE ON YOUR SPECIFICATION PLANS**

Frame P/N from Step 1. Filter Bag P/N from Step 2.

**NOTES:**

- ALL HD FRAMING IS CONSTRUCTED OF 304 STAINLESS STEEL FOR 25 YEAR LIFE RATING.
- TOTAL BYPASS CAPACITY, BYPASS CAPACITY WILL VARY WITH EACH SIZE DRAINAGE STRUCTURE. FLEXSTORM BEGINS FRAMING BYPASS TO MEET OR EXCEED THE DESIGN FLOW OF THE PARTICULAR DRAINAGE STRUCTURE.
- UPON ORDERING CONFIRMATION OF THE JOB CALL OUT, PRECAST MAKE AND MODEL, OR DETAILED DIMENSIONAL TURNS MUST BE PROVIDED TO CONFIRM AND ASSEMBLE YOUR CUSTOMIZED FLEXSTORM INLET FILTER. PART NUMBER ALONE IS NOT SUFFICIENT.

**GENERAL INSTALLATION INSTRUCTIONS:**

- REMOVE GRATE.
- PROP FLEXSTORM INLET FILTER ONTO LOAD BEARING LIP OF INLET STRUCTURE.
- REPLACE GRATE.

**ALL PRODUCTS MANUFACTURED BY INLET & PIPE PROTECTION, INC. DISTRIBUTED BY ADS WWW.INLETFILTERS.COM (866) 257-9555 PH (630) 355-3477 FX INDRINETFILTERS.COM**

292 **NEENAH** PAPER CITY COMPANY **FLEXSTORM** HD (DET 1 OF 1)

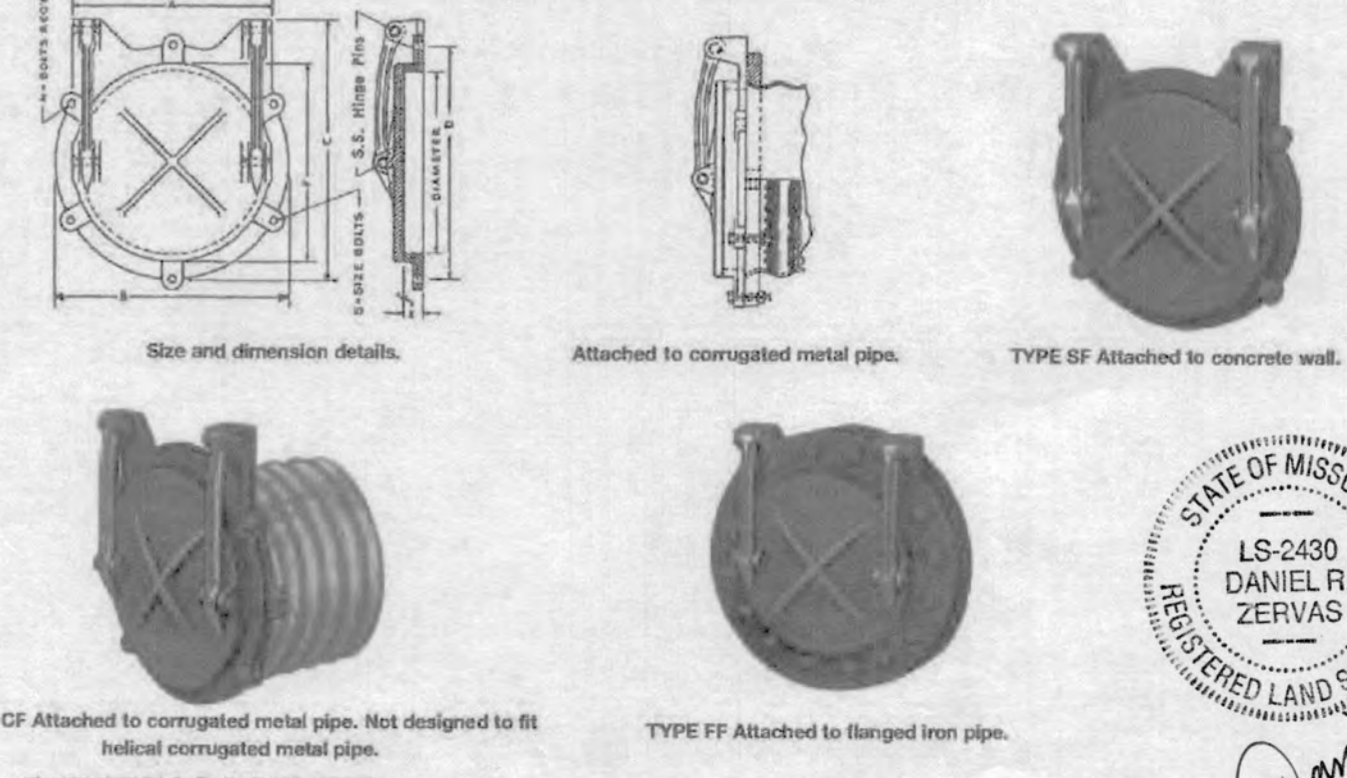
**R-5050 Series**  
 Types SF, CF and FF Automatic Drainage Gates

Automatic drainage gates are used in areas with a requirement to prevent back flow, such as storm and sanitary sewer systems. STANDARD GATES: Furnished with vertical closure for maximum ease of operation. GENERAL INFORMATION: Gates are made of cast iron. All moving parts operate on stainless steel hinge pins. The cover is hung with cast iron arms—Ductile iron arms on larger sizes—located at the outer edges near the center of gravity to ensure sensitive operation. For improved seating, order with neoprene seat at extra cost. Aluminum covers can be furnished for special requirements, if specified. Also available on special order and at extra cost are neoprene or solid bronze seat mountings and bronze bushed hinges. For applications with extreme head pressure, contact Product Engineering Dept. Specify:

- Catalog number and diameter.
- Type SF, Type CF, or Type FF.
- Aluminum covers when required.
- Other special requirements such as neoprene or bronze seat mounting or bronze bushing.

Catalog No.	Catalog No.	Catalog No.	Dimensions in inches								
Type SF	Type CF	Type FF	Diameter	A	B	C	D	E	F	N	S
R-5050-SF6	R-5050-CF6	R-5050-FF6	6	7	11	13	11	3/4	7	4	9/8
R-5050-SF8	R-5050-CF8	R-5050-FF8	8	11	13	11	1 1/4	9	7 1/4	4	9/8
R-5050-SF10	R-5050-CF10	R-5050-FF10	10	11 1/4	13 1/2	13	1 1/2	11	11 1/4	4	9/8
R-5050-SF12	R-5050-CF12	R-5050-FF12	12	13 1/4	15 1/2	13	1 3/4	13 1/4	13 1/4	4	9/8
R-5050-SF15	R-5050-CF15	R-5050-FF15	15	16 1/4	19	21	18 1/4	1 1/2	16 1/4	4	9/8
R-5050-SF18	R-5050-CF18	R-5050-FF18	18	19 1/4	22 1/2	24 1/4	22 1/2	1 1/4	19 1/4	4	9/8
R-5050-SF20	R-5050-CF20	R-5050-FF20	20	22 1/4	25 1/2	27 1/4	25 1/2	1 1/4	22 1/4	4	9/8
R-5050-SF21	R-5050-CF21	R-5050-FF21	21	22 1/4	25 1/2	27 1/4	25 1/2	1 1/4	22 1/4	4	9/8
R-5050-SF24	R-5050-CF24	R-5050-FF24	24	25 1/4	28 1/2	30 1/4	28 1/2	1 1/4	25 1/4	4	9/8
R-5050-SF27	R-5050-CF27	R-5050-FF27	27	28 1/4	31 1/2	33 1/4	31 1/2	1 1/4	28 1/4	6	7/8
R-5050-SF30	R-5050-CF30	R-5050-FF30	30	31 1/4	34 1/2	36 1/2	34 1/2	1 1/4	31 1/4	6	7/8
R-5050-SF36	R-5050-CF36	R-5050-FF36	36	37 1/2	41 1/2	43 1/2	41 1/2	1 3/8	37 1/2	6	7/8
R-5050-SF42	R-5050-CF42	R-5050-FF42	42	43 1/2	47 1/2	49 1/2	47 1/2	1 3/8	43 1/2	6	7/8
R-5050-SF48	R-5050-CF48	R-5050-FF48	48	49 1/2	54	56 1/2	54	1 1/2	49 1/2	6	1

\*N and S Dimensions apply to Type SF and CF gates only—the Type FF Flange faced and drilled A.W.W.A. class 125 standard.



292 **NEENAH** PAPER CITY COMPANY **FLEXSTORM** HD (DET 1 OF 1)

**"As-Built"**

FINAL MEASUREMENT DRAWING 11 OF 11

8-22-19

PROJECT TITLE:  
**WINGHAVEN POINTE**

ENGINEERING  
 DRAWING  
 SURVEYING

241 Point West Blvd.  
 St. Charles, MO 63301  
 630-226-3656  
 FAX 630-226-1718

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 I hereby specify that the documents intended to be authorized by my seal are limited to this award, and I hereby disclaim any responsibility for all other drawings, Specifications, Estimates, Reports or other documents or instruments relating to or intended to be used for any part or parts of the architectural engineering project or survey.

CLIFFORD L. HEITMANN  
 CIVIL ENGINEER  
 E29817  
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**REVISIONS**

Date	By	Comments
04/25/2016	DCSD & PWS02	CITY REVIEW
05/16/2016	CITY REVIEW	CITY REVIEW
06/15/2016	CITY REVIEW & DCSD	CITY REVIEW
07/29/2016	CITY REVIEW	CITY REVIEW

Developer / Owner:  
**ROLWES DEVELOPMENT, L.L.C.**  
 13100 MANCHESTER ROAD, SUITE 65  
 ST. LOUIS, MISSOURI 63131  
 314-821-9600

**BASIN SECTIONS AND DETAILS**

P+Z No.  
 #9831.65.02

City No.  
 #

Page No.  
 38 of 38

BAX PROJECT NAME : ALTAIR AT THE PRESERVE AS-BUILT HYDRAULICS  
 BAX PROJECT NO. :  
 DESIGN DATE :  
 DESIGNED BY :  
 SUBMITTED: FILENAME: 16403

UPP STR	LOW STR	L	DIA	UPPER FL LN	LOWER FL LN	PS	UPPER ST EL	DEPTH HY GR	UPPER HY EL	LOWER HY EL	HYDR GRADE	FR HEAD	VEL	VEL HEAD	JUNC LOSS	TURN LOSS	CURVE LOSS	STR GRADE	INL CAP	DR AREA	PI	Q	TQ	PIPE CAP	LINE NUMBER	REMARKS
CI 41	CI 40	50	15	493.58	490.86	5.44	498.77	4.92	493.86*	493.60	.00070	0.03	1.38	0.03	0.03	0.00	0.00	LOW	3.40	0.52	2.86	1.69	1.69	15.07	1	
CI 40	MH38	51	15	490.86	490.16	1.37	498.88	5.28	493.60	493.44	.00180	0.09	2.25	0.08	0.07	0.02	0.00	LOW	3.40	0.33	2.86	1.07	2.76	7.57	2	
HW39	MH38	20	54	488.96	488.95	0.05	499.00	4.67	494.33	493.45	.00340	0.07	7.20	0.81	0.81	0.00	0.00	HW	0.00	4.61	3.85	114.54	114.54	43.93	3	
MH38	HW37	69	54	488.94	488.93	0.01	499.57	6.13	493.44*	0.00	.00360	0.25	7.38	0.84	0.05	0.06	0.00	MH	0.00	0.00	0.00	0.00	117.30	23.69	4	HW=492.09
HW36	HW35A	93	54	487.35	487.34	0.01	499.50	6.32	493.18	491.84	.00410	0.38	7.87	0.96	0.96	0.00	0.00	HW	0.00	3.23	2.85	7.92	125.22	20.40	5	
HW35A	HW35	62	54	487.34	487.33	0.02	496.89	5.05	491.84*	0.00	.00410	0.25	7.87	0.96	0.00	0.00	0.00	MH	0.00	0.00	0.00	0.00	125.22	24.99	6	HW=491.04
AI 34	MH33	123	15	496.09	494.79	1.06	500.05	3.25	496.80*	496.04	.00420	0.52	3.42	0.18	0.18	0.00	0.00	4S	11.00	1.70	2.86	4.20	4.20	6.64	7	
MH33	YD32	60	15	494.79	494.00	1.32	501.05	5.38	495.67	495.31	.00420	0.25	3.42	0.18	0.11	0.11	0.00	MH	0.00	0.00	0.00	0.00	4.20	7.41	8	
YD32	GI 24	85	15	494.00	492.98	1.20	501.03	5.72	495.31	494.83	.00500	0.43	3.73	0.22	0.05	0.00	0.00	YD	0.00	0.13	2.86	0.38	4.58	7.08	9	
AI 31	GI 22	133	12	493.16	490.27	2.17	496.75	3.04	493.71	492.51	.00730	0.97	3.88	0.23	0.23	0.00	0.00	4S	11.00	1.04	2.86	3.05	3.05	5.25	10	
GI 30	MH29	51	15	498.14	497.75	0.76	503.24	4.20	499.04	499.00	.00040	0.02	1.02	0.02	0.02	0.00	0.00	LOW	3.40	0.34	2.86	1.25	1.25	5.65	11	
MH29	GI 28	130	15	497.75	497.12	0.48	504.02	5.59	498.43	498.37	.00040	0.05	1.02	0.02	0.01	0.01	0.00	MH	0.00	0.00	0.00	0.00	1.25	4.50	12	
GI 28	GI 27	216	18	496.91	495.99	0.43	503.31	5.65	497.66	497.49	.00070	0.14	1.53	0.04	0.03	0.00	0.00	LOW	3.40	0.42	2.86	1.46	2.71	6.86	13	
GI 27	MH26	114	24	495.99	495.15	0.74	500.19	2.89	497.30	497.15	.00080	0.09	2.05	0.07	0.06	0.01	0.00	LOW	3.40	1.05	2.86	3.74	6.45	19.42	14	
MH26	GI 25	127	24	495.15	494.60	0.43	500.72	3.97	496.75	496.60	.00080	0.10	2.05	0.07	0.05	0.05	0.00	MH	0.00	0.00	0.00	0.00	6.45	14.89	15	
GI 25	GI 24	273	24	494.60	493.15	0.53	499.41	3.77	495.64	495.15	.00150	0.42	2.81	0.12	0.07	0.00	0.00	LOW	3.40	0.65	2.86	2.38	8.83	16.49	16	
GI 24	GI 23	194	30	493.15	492.01	0.59	499.41	4.58	494.83	494.51	.00140	0.26	3.08	0.15	0.06	0.15	0.00	LOW	3.40	0.45	2.86	1.69	15.10	31.44	17	
GI 23	GI 22	344	30	492.01	490.12	0.55	498.53	5.17	493.36*	492.62	.00180	0.63	3.57	0.20	0.07	0.00	0.00	LOW	3.40	0.66	2.86	2.40	17.50	30.40	18	
GI 22	GI 21	188	30	490.12	489.07	0.56	497.50	4.99	492.51	491.62	.00350	0.66	4.96	0.38	0.23	0.15	0.00	LOW	3.40	1.03	2.86	3.80	24.35	30.65	19	
GI 21	AI 20	81	36	489.07	488.48	0.73	497.09	5.47	491.62*	491.48	.00170	0.14	3.89	0.23	0.00	0.13	0.00	LOW	3.40	0.85	2.86	3.13	27.48	56.92	20	
AI 20	FE19	108	36	488.48	487.72	0.70	499.28	9.30	489.98*	0.00	.00170	0.19	3.92	0.24	0.12	0.11	0.00	4S	11.00	0.09	2.86	0.23	27.71	55.84	21	ITP=491.00
GI 18	GI 17	88	12	495.23	494.74	0.56	500.57	3.73	496.84	496.08	.00640	0.56	3.63	0.20	0.20	0.00	0.00	LOW	3.40	0.77	2.86	2.85	2.85	2.66	22	
GI 17	MH11	107	15	494.74	493.95	0.74	501.04	4.96	496.08	495.72	.00340	0.36	3.06	0.14	0.00	0.00	0.00	LOW	3.40	0.24	2.86	0.90	3.75	5.55	23	
YD16	MH9	101	12	495.40	494.48	0.91	504.92	9.24	495.68*	495.48	.00030	0.03	0.80	0.01	0.01	0.00	0.00	YD	0.00	0.21	2.86	0.63	0.63	3.40	24	
GI 15	GI 8	61	12	494.85	494.60	0.41	499.73	3.47	496.26	495.60	.00630	0.38	3.60	0.20	0.20	0.00	0.00	LOW	3.40	0.77	2.86	2.83	2.83	1.44	25	
AI 14	AI 13	191	15	495.82	494.82	0.52	503.24	6.55	496.69	496.32	.00150	0.30	2.07	0.07	0.07	0.00	0.00	4S	11.00	0.88	2.86	2.54	2.54	4.67	26	
AI 13	YD12	65	15	494.82	493.75	1.65	501.11	4.79	496.32	495.98	.00330	0.22	3.04	0.14	0.12	0.05	0.00	4S	11.00	0.37	2.86	1.19	3.73	8.29	27	
YD12	MH11	60	15	494.36	493.95	0.68	501.71	5.73	495.98	495.72	.00380	0.23	3.23	0.16	0.03	0.00	0.00	YD	0.00	0.08	2.86	0.23	3.96	5.34	28	
MH11	GI 10	96	18	493.77	493.32	0.47	501.00	5.28	495.72	494.99	.00540	0.52	4.36	0.30	0.21	0.11	0.00	MH	0.00	0.00	0.00	0.00	7.71	7.19	29	
GI 10	MH9	83	24	493.32	492.82	0.60	499.91	4.92	494.99	494.82	.00200	0.17	3.22	0.16	0.00	0.06	0.00	LOW	3.40	0.64	2.86	2.40	10.11	17.56	30	
MH9	GI 8	180	24	492.82	491.64	0.66	499.90	5.78	494.12	493.68	.00230	0.41	3.42	0.18	0.03	0.01	0.00	MH	0.00	0.00	0.00	0.00	10.74	18.32	31	
GI 8	GI 7	194	24	491.64	490.69	0.49	499.50	5.82	493.68	492.69	.00410	0.79	4.60	0.33	0.20	0.13	0.00	LOW	3.40	0.23	2.86	0.87	14.44	15.83	32	
GI 7	GI 6	147	24	490.69	489.88	0.55	498.61	5.95	492.66	491.88	.00470	0.70	4.96	0.38	0.08	0.01	0.00	LOW	3.40	0.30	2.86	1.14	15.58	16.79	33	
GI 6	GI 5	152	30	489.88	489.01	0.57	498.22	6.46	491.76	491.51	.00170	0.25	3.41	0.18	0.00	0.00	0.00	LOW	3.40	0.33	2.86	1.17	16.75	31.06	34	
GI 5	MH4	120	30	489.01	488.40	0.51	497.08	5.81	491.27	490.90	.00220	0.27	3.95	0.24	0.10	0.01	0.00	LOW	3.40	0.71	2.86	2.65	19.40	29.24	35	
MH4	FE3	68	30	488.40	487.75	0.96	497.94	8.33	489.61*	0.00	.00220	0.15	3.95	0.24	0.04	0.04	0.00	MH	0.00	0.00	0.00	0.00	19.40	40.10	36	ITP=490.50
OS2	FE1	74	36	483.55	482.82	0.99	493.85	8.34	485.52*	0.00	.00600	0.45	7.34	0.84	0.84	0.00	0.00	OS	0.00	2.26	2.86	4.74	51.85	66.25	37	ITP=486.10

NOTE: LINES 3-6 AND 25 HAVE BEEN MODIFIED DUE TO NEGATIVE SLOPES.