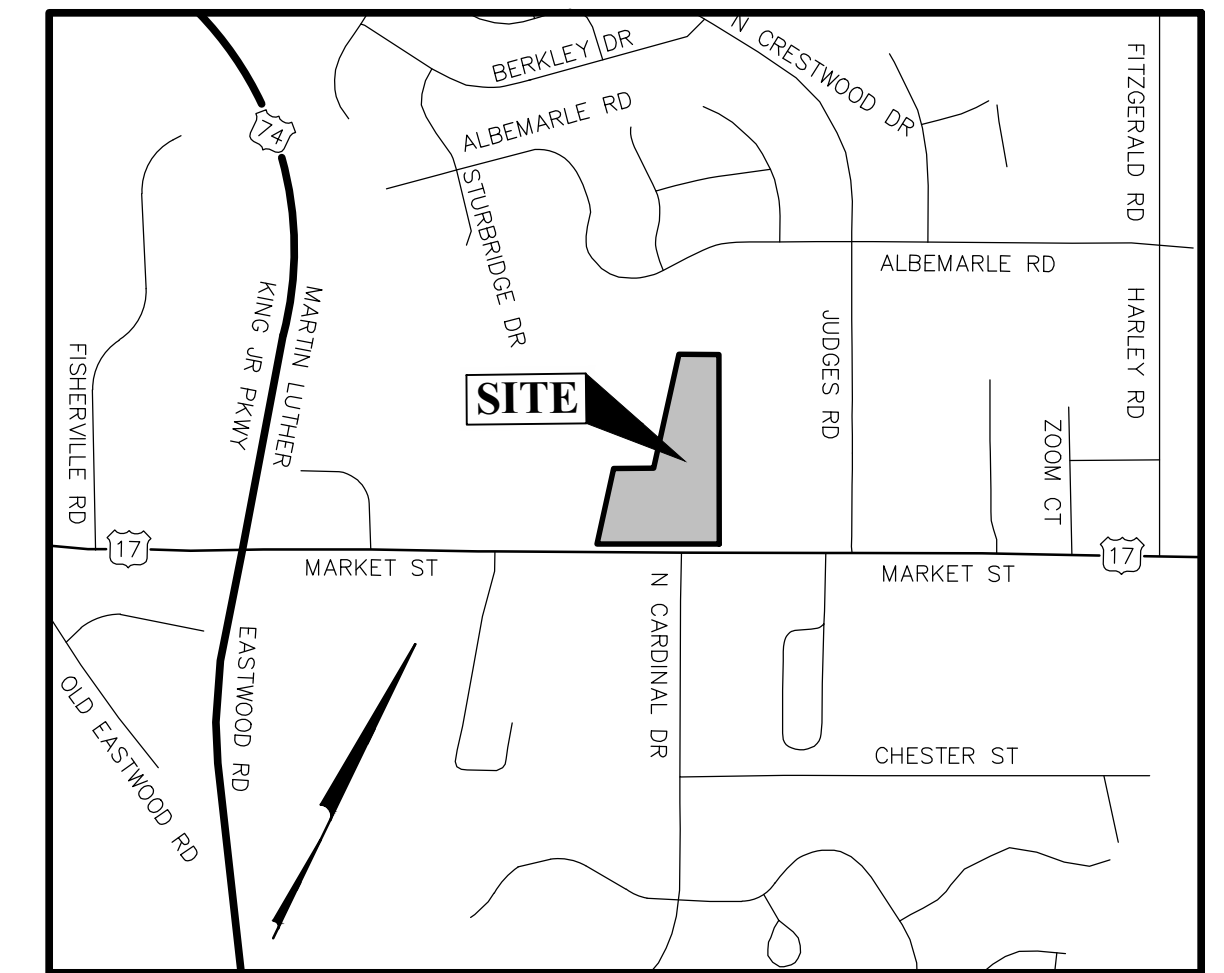
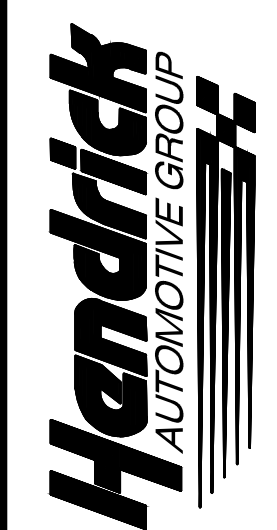


# CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA SITE IMPROVEMENT PLAN FOR MAZDA OF WILMINGTON 5813, 5821, & 5911 MARKET STREET APRIL 17, 2019

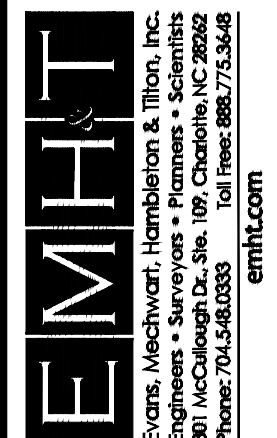


**VICINITY MAP**  
No Scale

MARK	DATE	DESCRIPTION
1	08/16/19	Revised per City of Wilmington, New Hanover County, and CTPU comments
2	09/17/19	Revised per City of Wilmington
3	11/23/19	Utility, Building, Addition
4	01/20/20	Removal of Building (1)



CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA  
SITE IMPROVEMENT PLAN  
FOR  
MAZDA OF WILMINGTON  
5813, 5821, & 5911 MARKET STREET  
COVER SHEET



DATE	April 17, 2019
SCALE	As Noted
JOB NO.	20181384
SHEET	C1.0

**OVERALL PHASING DESCRIPTION:**  
The dealership shall remain under normal operations throughout construction. Contractor to sequence work in accordance with the plans and any modifications shall be reviewed and submitted to the owner/owners representative for approval.

**Phase 1:**

- Existing service building (3) and Existing used car sales building (2) to be renovated;
- Existing Pod mount transformer and all existing building services to be relocated (see sheet C6.1)
- Proposed fire service and sanitary lines to be installed per plan.
- Install parking, paving and storm drainage.
- Contractor shall maintain access to the rear parking lot entrance throughout construction.
- Contractor to coordinate with owner to ensure site is accessible for deliveries. Car haulers will unload vehicles offsite and transport single vehicles back to dealership.

**Phase 2:**

- Existing Pre-Owned sales building to be demolished and new dealership (4) constructed.
- Install utilities, parking paving and storm drainage.
- Contractor shall maintain access to the rear parking lot entrance throughout construction.
- Contractor to coordinate with owner to ensure site is accessible for deliveries. Car haulers will unload vehicles offsite and transport single vehicles back to dealership.
- Contractor shall maintain access to the rear parking lot entrance throughout construction.
- Contractor to coordinate with owner to ensure site is accessible for deliveries. Car haulers will unload vehicles offsite and transport single vehicles back to dealership.

**Phase 3:**

- Existing Pre-Owned sales building (1) to be demolished.
- Install parking, paving and storm drainage.
- Contractor shall maintain access to the rear parking lot entrance throughout construction.
- Contractor to coordinate with owner to ensure site is accessible for deliveries. Car haulers will unload vehicles offsite and transport single vehicles back to dealership.

**SITE DATA SUMMARY\***

Project Name:	Hendrick Mazda of Wilmington
Proposed Site Use:	Automotive Sales & Service
Existing Site Use:	Existing Automotive Sales & Service
Project Address:	5815 & 5911 Market Street, Wilmington, NC
Parcel ID Number:	R05006-001-001-000, R05006-001-003-000, R05006-001-005-000, R05006-001-006-000
Zoning District(s):	RB (City of Wilmington)/I-1 (New Hanover County)
Overlay District(s) Designation:	N/A
Building Setbacks:	Required: 25' Front Setback, 0' Side Setback, 15' Rear Setback Provided: 132' Front, 71' Side (E), 393' Side (W), 16' Rear
Total Amount of Acreage within the Project Boundaries:	5.35 AC
Total Amount of Acreage within the Site Boundaries:	9.12 AC (397,267 SF)
Existing Buildings Onsite:	4 (23,878 sf)
Existing Building to be Demolished:	1
Proposed Buildings:	3 (11,650 sf)
Proposed Building (4) Height:	26'
Proposed Building (5) Height:	12'
Proposed Building (6) Height:	12'-8"
Total Buildings Onsite:	27,949 sf
Building Construction Type:	Type - B

\*See sheet C4.0 for full Site Data Table

**NOTE:**

- These plans are to be in strict conformance with the City of Wilmington, New Hanover County, NCDOT, and Cape Fear Public Utility Authority Specifications and Standards.
- Sediment and erosion control measures shall be maintained throughout this development as indicated in the Erosion Control Phase 1, 2 & 3 Plan Sheets, and per New Hanover County requirements.

**FEMA NOTE:**  
According to the Federal Emergency Management Agency's Flood Insurance Map, dated August 28, 2018, the subject tract shown herein lies within Zone "X" (areas determined to be outside 0.2% annual chance floodplain), Map No. 3720314800K, Panel Number 3148.

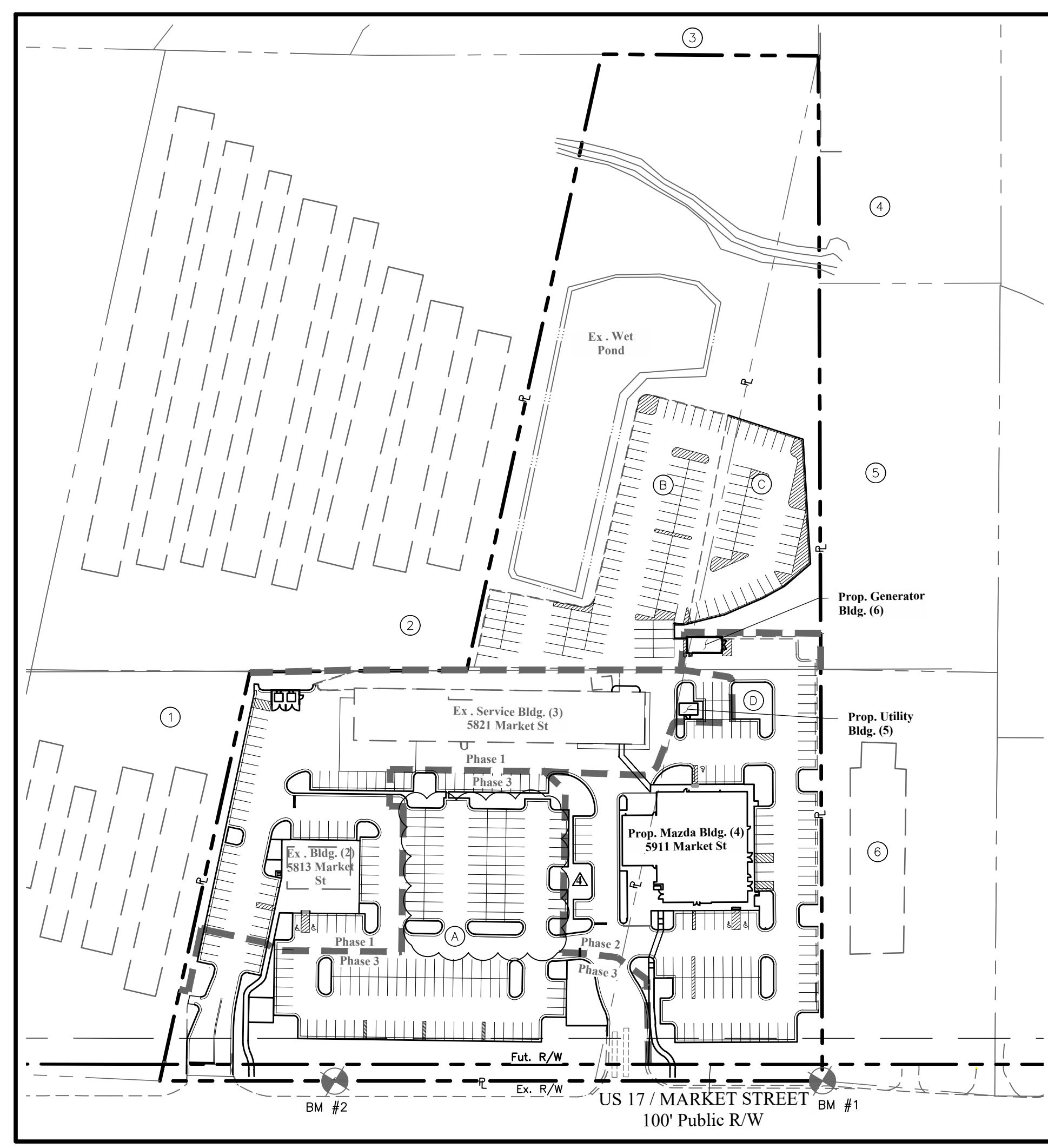
**SOIL TYPES:**  
According to a map provided by the Natural Resources Conservation Service dated January 17, 2019, 91.7% of soils on this site are Se, Seagate fine sand. 8.3% of soils on this site are J0, Johnston soils.

**NCDOT NOTE:**  
These plans are designed to tie in with the proposed NCDOT TIP U-4902C project. All roadway improvement work associated with the U-4902C project is to be designed and constructed by NCDOT. All roadway improvements shown are for reference only and based on preliminary drawings provided by NCDOT on January 17, 2019.

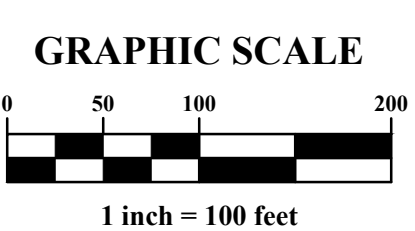
**STORMWATER NOTE:**  
The existing NCDEQ stormwater permit number for the site is SW-8950626. A minor modification has been submitted to NCDEQ for approval. The proposed improvements to the site will not increase the net built upon area or change the size or design of the existing BMP.

**BENCH MARKS**  
Horizontal: NAD 83 (2011)  
Vertical: NAVD 88

BM#1	Iron Pipe Found, 1" Pipe Flush	Northing = 184273.19 Easting = 2345592.59 Elev. = 40.38
BM#2	Fire hydrant top street side nut	Northing = 184073.718 Easting = 2345168.374 Elev. = 42.107



**INDEX MAP**  
Scale: 1" = 100'



**ADJOINING PROPERTY OWNERSHIP TABLE**

- GO STORE IT WILMINGTON LLC  
PIN: R05005-001-017-000  
DB 5892 P. 2453  
AREA: 1.86 AC  
ZONING: RB  
LAND USE: SELF STORAGE
- GO STORE IT WILMINGTON LLC  
PIN: R05005-001-015-000  
DB 5892 P. 2453  
AREA: 5.89 AC  
ZONING: I-1  
LAND USE: SELF STORAGE
- CAROLINA STORAGE INVESTORS LLC  
PIN: R05000-001-003-000  
DB 5725 P. 538  
AREA: 2.69 AC  
ZONING: I-1  
LAND USE: SELF STORAGE
- CAROLINA STORAGE INVESTORS LLC  
PIN: R05006-001-008-000  
DB 5351 P. 2966  
AREA: 2.41 AC  
ZONING: I-1  
LAND USE: SELF STORAGE
- THE CAMP GROUND LLC  
PIN: R05000-001-004-000  
DB 5657 P. 2350  
AREA: 1.54 AC  
ZONING: I-1  
LAND USE: EQUIPMENT RENTAL
- THE CAMP GROUND LLC  
PIN: R05006-001-007-000  
DB 5657 P. 2350  
AREA: 1.66 AC  
ZONING: RB  
LAND USE: EQUIPMENT RENTAL

**PROPERTY OWNERSHIP TABLE**

- WILMINGTON HO RE LLC  
PIN: R05006-001-001-000  
DB 6149 P. 2269  
AREA: 3.91 AC  
ZONING: RB (City of Wilmington)
- WILMINGTON HO RE LLC  
PIN: R05006-001-003-000  
DB 6149 P. 2280  
AREA: 2.81 AC  
ZONING: I-1 (New Hanover County)
- WILMINGTON HO RE LLC  
PIN: R05006-001-006-000  
DB 6149 P. 2280  
AREA: 0.61 AC  
ZONING: I-1 (New Hanover County)
- WILMINGTON HO RE LLC  
PIN: R05006-001-005-000  
DB 6149 P. 2280  
AREA: 1.44 AC  
ZONING: RB (City of Wilmington)

**Sheet Index**

Sheet Number	Sheet Title
C1.0	Cover Sheet
C1.1	General Notes & Abbreviations
C2.0	Overall Existing Conditions
C2.1	Existing Conditions and Demolition Plan Phase 1
C2.2	Existing Conditions and Demolition Plan Phase 2
C2.3	Existing Conditions and Demolition Plan Phase 3
C3.0	Erosion Control Plan Phase 1
C3.1	Erosion Control Plan Phase 2
C3.2	Erosion Control Plan Phase 3
C3.3	Erosion Control Details
C3.4	Erosion Control Details
C4.0	Overall Site Plan
C4.1	Site Plan Phase 1
C4.2	Site Plan Phase 2
C4.3	Site Plan Phase 3
C4.4	Turning Movement Plan
C4.5	Fire Apparatus Plan
C4.6	Intersection Sight Distance Plan
C5.0	Overall Grading Plan
C5.1	Grading Plan Phase 1 & 3
C5.2	Grading Plan Phase 2
C5.3	Future Driveway Detail
C5.4	Drainage Area Plan
C6.0	Overall Utility Plan
C6.1	Utility Plan Phase 1A
C6.2	Utility Plan Phase 1B
C6.3	Utility Plan Phase 2
C6.4	Utility Plan Phase 3
C7.0	Site Details
C7.1	Site Details
C7.2	Site Details
C7.3	Utility Details
C7.4	Utility Details
L1.0	Tree Survey
L1.1	Tree Survey Table
L2.0	Landscaping Plan
L2.1	Landscaping Details

**CITY OF WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division

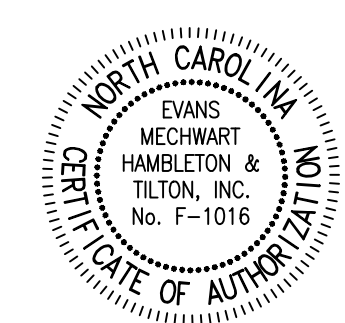
APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

Signed: \_\_\_\_\_

**Approved Construction Plan**

Name	Date
Planning _____	_____
Traffic _____	_____
Fire _____	_____



**811**  
Know what's below.  
Call before you dig.  
North Carolina One-Call Center, Inc.

**Call 1-800-632-4949 before you dig: It's the law!**

By law, everyone MUST contact the North Carolina One-Call Center, 1-800-632-4949, at least 72 hours but no more than 10 working days (excluding weekends and legal holidays) before beginning ANY digging project.

**DEVELOPER**  
Hendrick Automotive Group  
6000 Monroe Road  
Charlotte, NC 28212  
Contact: Greg Clark  
Tel: (704) 566-3313  
Fax: (704) 566-3295  
greg.clark@hendrickauto.com

**ENGINEER**  
EMH&T  
301 McCullough Drive, Suite 109  
Charlotte, NC 28262  
Contact: Brian Rossi, PE  
Tel: (704) 548-0333  
Fax: (704) 548-0334  
brossi@emht.com

**SURVEYOR**  
EMH&T  
301 McCullough Drive, Suite 109  
Charlotte, NC 28262  
Contact: Ed Miller, PLS  
Tel: (704) 548-0333  
Fax: (704) 548-0334  
emiller@emht.com

**ARCHITECT**  
Redline Design Group  
1023 W. Morehead St., Suite 2220  
Charlotte, NC 28208  
Contact: David Eve  
Tel: (704) 377-2990  
Fax: (704) 377-2909  
deve@redlinedg.com

**SITE LIGHTING**  
Teeter Engineering Group  
5500 77 Center Drive, Suite 140  
Charlotte, NC 28217  
Contact: Buck Driggers  
Tel: (980) 949-7569  
buckd@tegra.com

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**LEGEND**

EXISTING	
---	Right of way
---	Property Line
---	Parcel Line
---	Existing Building Setback
---	Easement
---	Contours
---	Building
---	Pavement
---	Curb
---	Fence
---	Sign
---	Storm Service
---	Catch Basin
---	Storm Manhole
---	Sanitary Sewer
---	SAN
---	Sanitary Service
---	Sanitary Cleanout
---	Sanitary Manhole
---	Water Main
---	Water Service
---	Hydrant
---	Water Meter
---	Back Flow Preventer
---	Gas Line
---	Gas Valve
---	Gas Marker
---	Propane Tank
---	Communication Line
---	Communication Box
---	OHE
---	Over Head Electric Line
---	OHW
---	Over Head Wire, Multiple Utilities
---	OHC
---	Over Head Comm Line
---	Utility Pole
---	Power Pole
---	Power Box
---	Pull Box
---	Guy Wire
---	Light Pole
---	Transformer
---	Underground Electric
---	Fiber Optic Line
---	Soil Boundary
---	Construction Phasing Limits
---	Trees

**OVERALL PHASING DESCRIPTION:**  
 The dealership shall remain under normal operations throughout construction. Contractor to sequence work in accordance with the plans and any modifications shall be reviewed and submitted to the owner/owners representative for approval.

- Phase 1:**
- Existing service building (3) and Existing used car sales building (2) to be renovated;
  - Existing Pod mount transformer and all existing building services to be relocated (see sheet C6.1)
  - Proposed fire service and sanitary lines to be installed per plan.
  - Install parking, paving and storm drainage.
  - Contractor shall maintain access to the rear parking lot entrance throughout construction.
  - Contractor to coordinate with owner to ensure site is accessible for deliveries. Car haulers will unload vehicles offsite and transport single vehicles back to dealership.

- Phase 2:**
- Existing Pre-Owned sales building (4) to be demolished and new dealership constructed.
  - Contractor shall maintain access to the rear parking lot entrance throughout construction.
  - Contractor to coordinate with owner to ensure site is accessible for deliveries. Car haulers will unload vehicles offsite and transport single vehicles back to dealership.

- Phase 3:**
- Existing Pre-Owned sales building (1) to be demolished.
  - Install parking, paving, and storm drainage.
  - Contractor shall maintain access to the rear parking lot entrance throughout construction.
  - Contractor to coordinate with owner to ensure site is accessible for deliveries. Car haulers will unload vehicles offsite and transport single vehicles back to dealership.

**PHASING NOTE**  
 Phase Line is approximate. Contractor to coordinate with owner for location of temporary fencing, gate locations, delivery access, etc. throughout construction. Modifications to the phase line can be incorporated by the contractor with approvals by the owner/owner's representative and local agencies (City of Wilmington, NCDOT etc.) if required.

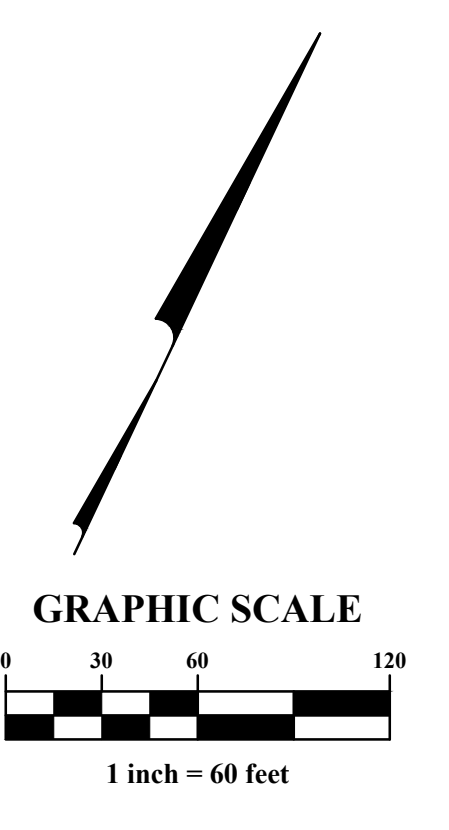
- GENERAL NOTES**
- Total Site Acreage: 9.12 AC.
  - Ex. Site Impervious Area: 6.07 AC.
  - Zoning is split between City of Wilmington, Regional Business District (RB), and New Hanover County, Light Industrial District (I-1).
  - On-site existing conditions are based on a field performed boundary and topographic survey by EMH&T on May 29, 2018 and January 11, 2019. Off-site existing conditions are based on available GIS information and aerial imagery.
  - Underground utilities shown are approximate and based on aboveground evidence available at the time of survey and point markings from NC811 Utility Locate Request Ticket A181500289-00A. Lacking excavation, the exact nature and location of underground features cannot be accurately, completely, and reliably depicted.
  - All work to be accomplished in strict accordance with all Local, City and State Ordinances.
  - Contractor is to perform a site walk prior to bid to verify existing conditions.
  - The contractor is responsible to provide a separate demolition and construction schedule detailing coordination of existing utility services to be maintained and any utility service interruptions to owner or adjacent properties.
  - Protect adjacent curbs, trees, buildings, utilities and other items to remain from damage. Contractor shall be responsible for repair and/or payment of any damaged item(s) that are to remain.
  - Contractor is responsible to barricade the site as necessary to prevent unauthorized entry and provide safety measures per local, state and federal regulations.
  - For all items to be removed, whether shown or noted on the plans, include all underground elements in bid price, including, but not limited to: foundations, gravel fills, tree roots, old pipe, etc.
  - Any work to be completed within Public ROW shall be properly permitted prior to beginning work. Maintenance of traffic in conformance to all applicable laws and regulations shall be established prior to beginning work.
  - All trenches from demolition of utilities shall be backfilled to 98% of the maximum density obtainable with the standard proctor test, unless otherwise directed by the Geotechnical Engineering report or on-site representative.
  - Utility locations shown are based on site conditions at the time of survey. Contractor(s) are to have all utilities accurately marked prior to construction.
  - Contractor shall coordinate utility removal and relocations with all private utility companies.
  - The contractor shall repair all damages to existing utilities that occur during construction at no additional cost to the owner. The contractor must call all the appropriate utility companies at least 48 hours before any excavation to request exact field location of utilities.
  - Protect all utilities to remain. Contractor shall maintain service for all utilities throughout the duration of construction.
  - Refer to landscape drawings for tree protection notes and details.
  - All demolition items shall be removed and disposed of off-site unless approved by the on-site Geotechnical Engineer as fill material.
  - Disconnect and cap all utilities to be abandoned. Fill all utilities to be abandoned greater than 6 inches in diameter with flowable fill material. Contractor may remove utilities to be abandoned in lieu of abandonment.
  - Protect survey control during construction. Provide additional control as necessary to perform construction operation.

**Soil Survey Legend**

Symbol	Unit Name	Hydrologic Soil Group
Se	Seagate fine sand	A/D
JO	Johnston soils	B

**SOIL TYPES:**  
 According to a map provided by the Natural Resources Conservation Service dated January 17, 2019, 91.7% of soils on this site are Se, Seagate fine sand, 6.3% of soils on this site are JO, Johnston soils.

**FEMA NOTE:**  
 According to the Federal Emergency Management Agency's Flood Insurance Map, dated August 28, 2018, the subject tract shown herein lies within Zone "X" (areas determined to be outside 0.2% annual chance floodplain), Map No. 3720314800K, Panel Number 3148.



**WILMINGTON NORTH CAROLINA**  
 Public Services • Engineering Division  
**APPROVED STORMWATER MANAGEMENT PLAN**  
 Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
 Signed: \_\_\_\_\_  
**Approved Construction Plan**

Name	Date
Planning	_____
Traffic	_____
Fire	_____



**REVISIONS**

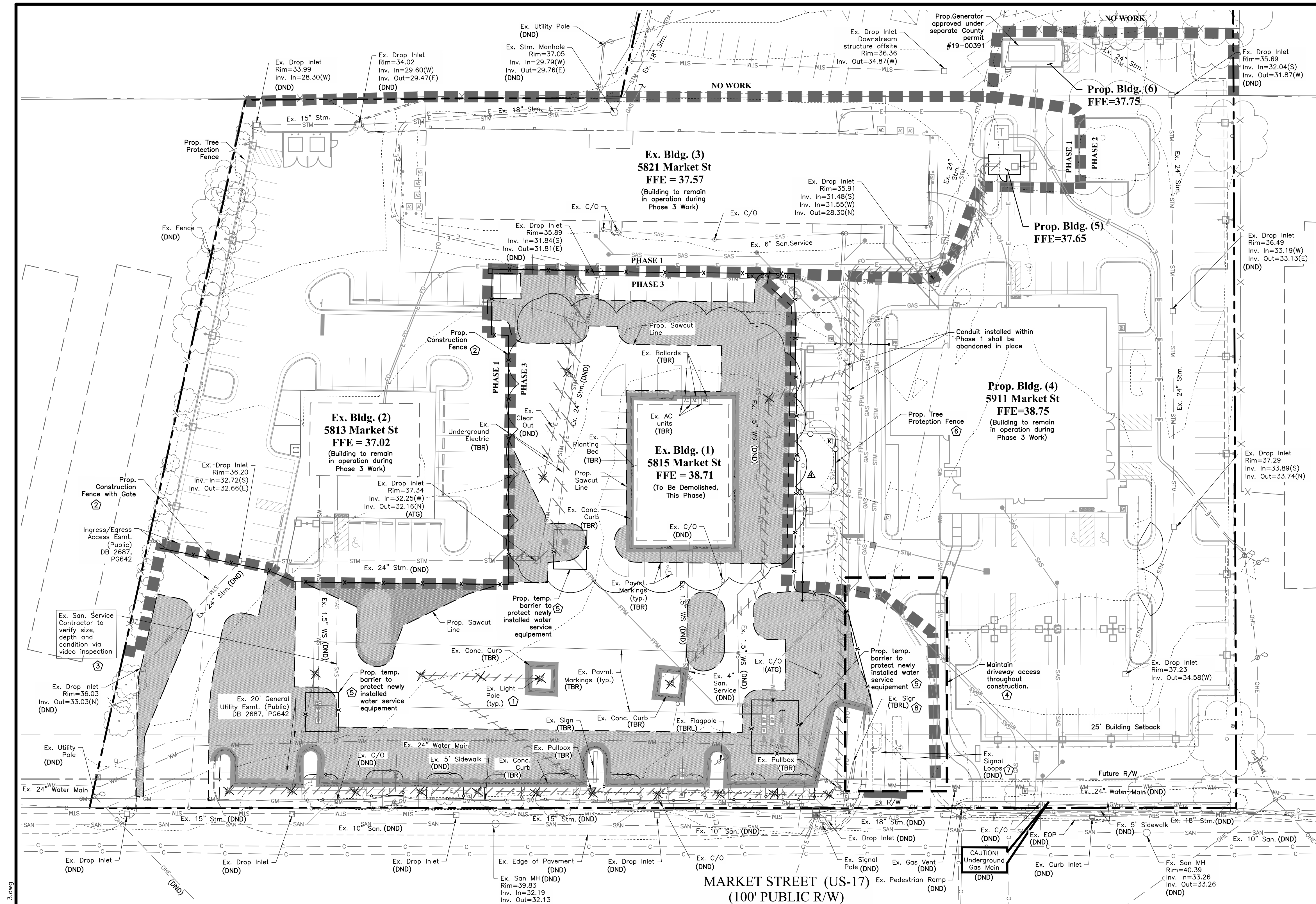
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A	08/16/19	Revised per City of Wilmington, New Hanover County, and CTPUA comments
B	09/17/19	Revised per City of Wilmington review comments
C	11/13/19	Utility Building Addition
D	01/06/20	Removal of Building(1)

**EMH&T**  
 Evans, Mechwart, Hamilton & Tilton, Inc.  
 Engineers - Surveyors - Planners - Scientists  
 1000 S. Salisbury Blvd., Suite 200  
 Winston-Salem, NC 27158  
 Phone: 703.580.0333 Fax: 703.580.0334  
 emht.com

**CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA**  
 FOR  
**SITE IMPROVEMENT PLAN**  
**MAZDA OF WILMINGTON**  
**5813, 5821, & 5911 MARKET STREET**  
**OVERALL EXISTING CONDITIONS**

DATE: April 17, 2019  
 SCALE: 1" = 60'  
 JOB NO.: 20181384  
 SHEET: C2.0

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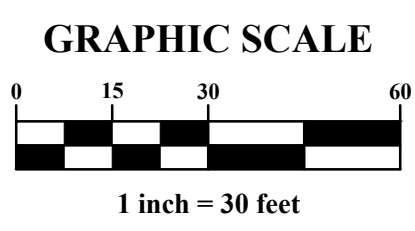
LEGEND	
<b>EXISTING</b>	
---	Right-of-Way & Property Line
---	Gas Main
---	Sanitary Sewer Main
---	Sanitary Service
---	Water Main
---	Water Service
---	Storm Sewer
---	Fiber Optic/Comm. Line
X	Fence
○	Fire Hydrant
○	Water Meter
○	Light Pole
○	Utility Pole
<b>DEMOLITION</b>	
////	Underground Electric, to be Removed
////	Storm Sewer, to be Removed
////	Sanitary Sewer, to be Removed
////	Curb and Gutter, to be Removed
---	Saw Cut Line
X	Light Pole, to be Removed
X	Bollard, to be Removed
○	Tree, to be Removed
---	Full Depth Pavement Removal
(TBR)	To Be Removed
(TBL)	To Be Relocated
(DND)	Do Not Disturb
(ATG)	Adjust To Grade
(TBA)	To Be Abandoned
○	Tree Protection (See Detail Sheet L2.1)

- NOTE**
- See Sheet C2.0 for Legend and General Existing Conditions and Demolition Notes.
  - Contractor to coordinate with owner to maintain access to north parking lot throughout construction.
  - Prior to starting any demolition work, the Contractor shall coordinate with Duke Energy regarding the site lighting.  
Contact: Phil Tyler  
Phil.Tyler@duke-energy.com (910)524-9437  
Contractor shall be responsible for scheduling all work/meetings and must be coordinated with the owner.
  - The contractor shall repair all damage to existing utilities that occurs during construction at no additional cost to the owner. The contractor must call the appropriate utility companies at least 48 hours before any excavation to request exact field location of utilities.
  - Protect all utilities to remain. Contractor shall maintain service for all utilities throughout the duration of construction.
  - Refer to landscape drawings for tree protection notes and details.
  - All demolition items shall be removed and disposed of off-site unless approved by the on-site Geotechnical Engineer as fill material.
  - Disconnect and cap all utilities to be abandoned. Fill all utilities to be abandoned greater than 6 inches in diameter with flowable fill material. Contractor may remove utilities to be abandoned in lieu of abandonment.
  - Protect survey control during construction. Provide additional control as necessary to perform construction operation.

- KEYNOTES:**
- Removal to include all associated facilities including foundations & pullbox. Conduit not in conflict with proposed improvements may be abandoned in place.
  - Contractor to adjust construction fence as necessary to complete work within each phase.
  - Contractor to provide sanitary video inspection to design engineer for review. If service lateral is required to be replaced, it must be replaced with a 6" lateral.
  - Contractor may alter phasing of drive entrance construction and maintenance of traffic from what is shown on the plans for ingress and egress of site. Contractor to coordinate with owner/owner representative prior to deviations from the plans.
  - Contractor to adjust temporary barrier as necessary to complete work within each phase.
  - Tree protection fence shall be adjusted for the pavement and curb removal only. Adjustment of the tree protection fence shall be supervised by a private arborist to be obtained by the Contractor. Once pavement and curbs are removed, the tree protection fence shall be reinstalled as shown on the plan.
  - Contractor shall replace any damaged signal loops per NCDOT standards and specifications.
  - Contractor shall remove and replace existing sign under separate sign permit. Contractor to coordinate with owner/owner representative for sign location.

**PAVEMENT REMOVAL**  
Pavement removal limits do not include all existing and proposed utility installations and removals. Contractor shall include pavement removal for utilities within specific line items.

**PHASING NOTE**  
Phase Line is approximate. Contractor to coordinate with owner for location of temporary fencing, gate locations, delivery access, etc. throughout construction. Modifications to the phase line can be incorporated by the contractor with approvals by the owner/owner's representative and local agencies (City of Wilmington, NCDOT etc.) if required.



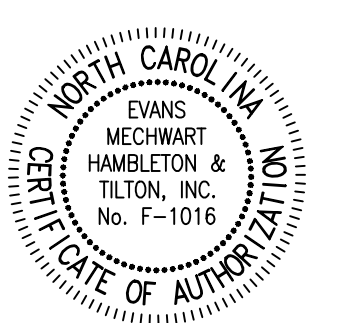
**CITY OF WILMINGTON**  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

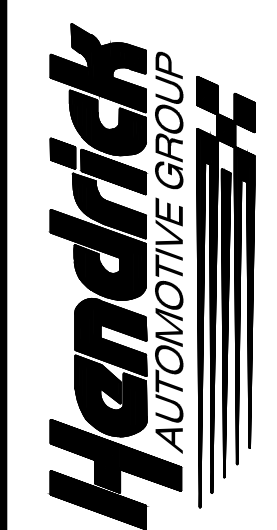
Signed: \_\_\_\_\_

**Approved Construction Plan**

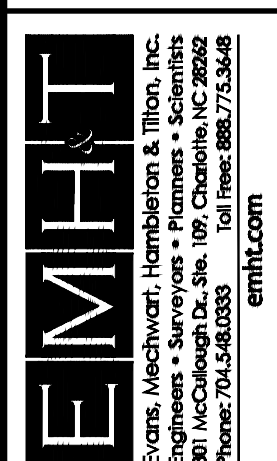
Name	Date
Planning _____	_____
Traffic _____	_____
Fire _____	_____



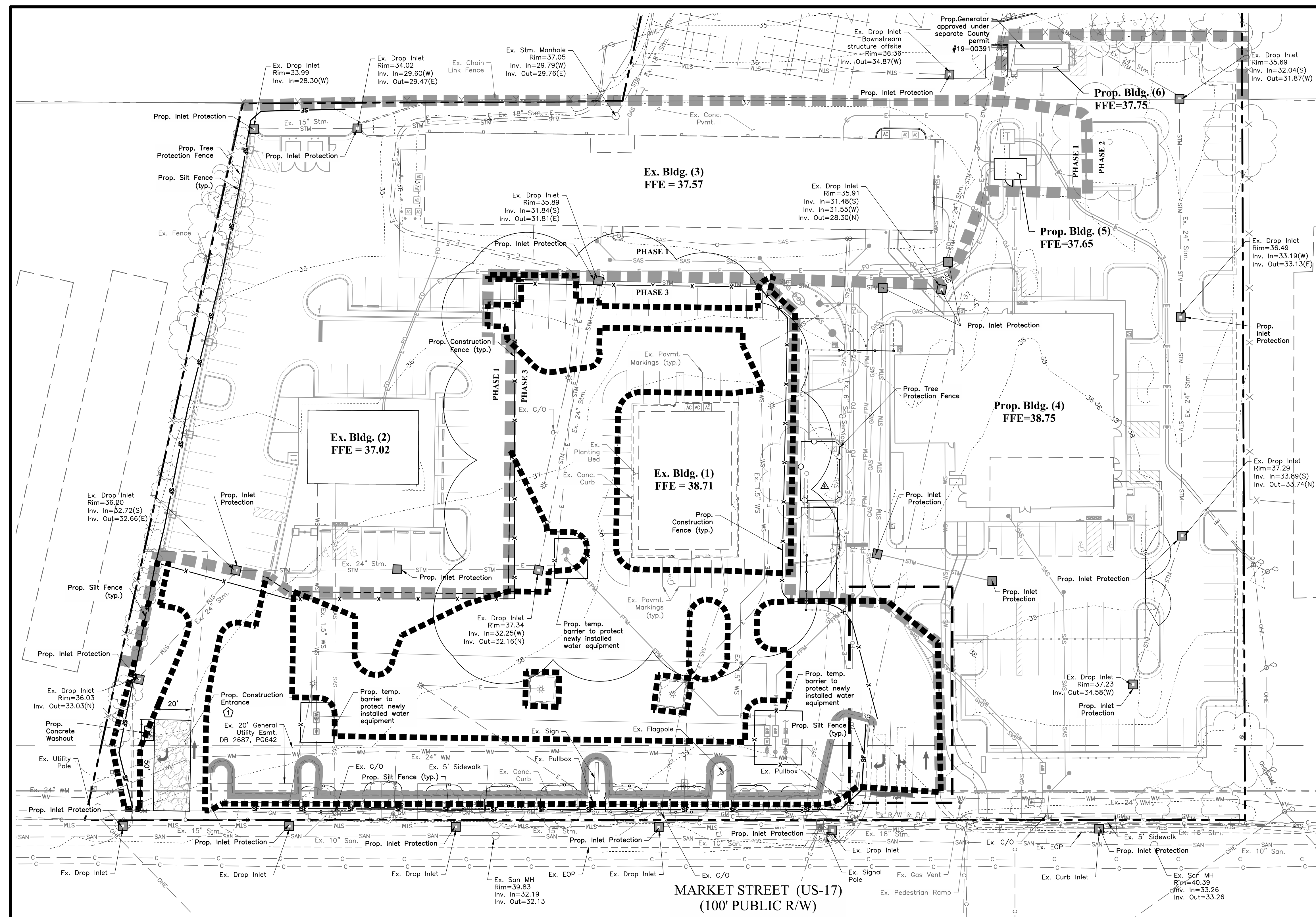
MARK	DATE	DESCRIPTION
1	08/16/19	Revised per City of Wilmington, New Hanover County, and CTPUA comments
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3	11/13/19	Utility Building Addition
4	12/02/19	Removal of Building (1)



CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA  
FOR  
SITE IMPROVEMENT PLAN  
**MAZDA OF WILMINGTON**  
5813, 5821, & 5911 MARKET STREET  
EXISTING CONDITIONS AND DEMOLITION PLAN PHASE 3



DATE	April 17, 2019
SCALE	1" = 30'
JOB NO.	20181384
SHEET	C2.3



LEGEND	
<b>EXISTING</b>	
	Right of way
	Property Line
	Parcel Line
	Existing Building Setback
	Easement
	Contours
	Building
	Undisturbed Natural Area
	Pond
	Pavement
	Curb
	Fence
	Sign
	Storm Service
	Catch Basin
	Double Catch Basin
	Storm Manhole
	Sanitary Service
	Sanitary Force Main
	Sanitary Cleanout
	Sanitary Manhole
	Water Service
	Fire Hydrant Service
	Electric Transformer
	HVAC Unit
	Power Box
	Power Pole
	Light Pole
<b>PROPOSED</b>	
	Construction Entrance (See Detail on Sheet C3.3)
	Silt Fence (See Detail on Sheet C3.3)
	Tree Protection Fence (See Detail on Sheet C3.3)
	Inlet Protection (See Detail on Sheet C3.3)
	Concrete Washout (See Detail on Sheet C3.4)
	Limits of Disturbance
	Phasing Limits

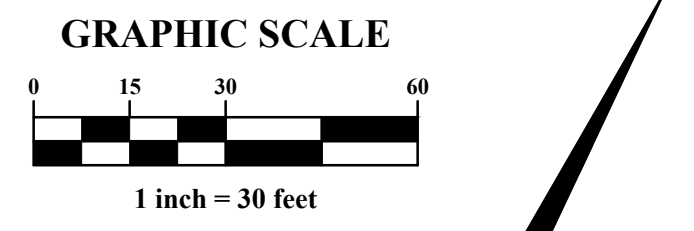
- GENERAL NOTES**
- Total Site Acreage: 9.21 AC.
  - Total Project Acreage: 5.35 AC.
  - Denuded Acreage: 1.15 AC. (Phase 3), 3.19 AC (Total)
  - Contractor shall install tree protection fencing prior to any construction activity. See sheet C1.1 for additional City of Wilmington tree protection notes.
  - On-site existing conditions are based on a field performed boundary and topographic survey by EMM&T on January 11, 2019. Off-site existing conditions are based on available GIS information and aerial imagery.
  - According to the Federal Emergency Management Agency's Flood Insurance Map, dated August 28 2018, this property is located within Zone "X" (areas determined to be outside 0.2% annual change floodplain), Map No. 3720314800K.

- EROSION CONTROL NOTES**
- Remove and dispose of offsite accumulated sediment from erosion control devices as required.
  - Contractor is fully responsible for maintaining all erosion control devices throughout construction. Devices shall be inspected by the Contractor after each rain and repaired as needed.
  - Temporary stockpiles are not to be located in drainage ways. Maintain 2:1 maximum slope on all stockpiles. Any stockpiles near perimeter of construction area must be wrapped in silt fence and stabilized immediately.
  - All erosion control measures shall conform to the standards set forth in the New Hanover County Soil Erosion and Sedimentation Control Ordinance.
  - Any grading beyond the denuded limits shown on the plan is a violation of the New Hanover County Ordinance and is subject to a fine(s).
  - Slopes shall be graded no steeper than 2:1. Fill slopes greater than 10' require adequate terracing.
  - On site burial pits require an on-site Demolition Landfill Permit From the Zoning Administrator.
  - See Erosion Control Details on Sheet C3.3 & C3.4.
  - Streets in front of the project shall be kept clean at all times or wash station will be required.
  - Sediment will be removed from behind the silt fence when it becomes about 0.5' deep at the fence. The silt fence will be repaired as necessary to maintain a barrier.
  - Additional measures to control erosion and sediment may be required by erosion control inspector.
  - All erosion and sediment control practices will be checked for stability and operation following every runoff producing rainfall but in no case less than once every week. Any needed repairs will be made immediately to maintain all practices as designed.
  - Grading more than one acre without an approved Erosion Control Plan is a violation of the City/County Erosion Control Ordinance and is subject to a fine.
  - All perimeter dikes, swales, ditches, perimeter slopes and all slopes steeper than 3 horizontal to 1 vertical (3:1) shall be provided temporary or permanent stabilization with ground cover as soon as practicable but in any event within 7 calendar days from the last land-disturbing activities.
  - All other disturbed areas shall be provided temporary or permanent stabilization with ground cover as soon as practicable but in any event within 14 calendar days from last land-disturbing activity.
  - A Grading Plan must be submitted for any lot grading exceeding one acre that was not previously approved.
  - Contractor shall modify diversion ditches as needed with the construction sequencing. All modifications to the plan locations must be coordinated with the New Hanover County Inspector.

- CONSTRUCTION SEQUENCING**
- Schedule and hold a pre-construction conference prior to beginning any land-disturbing activities. This conference should be attended by a representative of the financially responsible party and/or the general contractor, grading sub-contractor, erosion control sub-contractor and the New Hanover Engineering Office.
  - Obtain Land Disturbing Permit and placard, and post the placard on site.
  - Obtain an approved (stamped) S&E control plan and keep it on site, either in the inspection box, construction office or with the contractor.
  - Ensure any construction egress/exit, silt fencing, and other erosion control measures required for Phase I work as specified on the plan are installed per plan. Remove only trees and ground cover necessary to install these devices.
  - Notify the New Hanover site inspector after erosion control measures have been installed and project has started.
  - Grade site to elevations indicated and provide necessary sediment and erosion control measures.
  - Perform maintenance as necessary to provide adequate sediment control measures on-site.
  - Remove all erosion control measures after the New Hanover Engineering Office approval of permanent stabilization.

**PHASING NOTE**  
Phase Line is approximate. Contractor to coordinate with owner for location of temporary fencing, gate locations, delivery access, etc. throughout construction. Modifications to the phase line can be incorporated by the contractor with approvals by the owner/owner's representative and local agencies (City of Wilmington, NCDOT etc.) if required.

- KEYNOTE**
- Contractor to coordinate with New Hanover County Inspector for construction entrance materials and/or eliminating the stone entrance and providing a wheel wash station. Contractor may elect to replace gravel construction drive with approved erosion control matting product specifically designed to remove dirt/mud from construction traffic on a paved site. Existing site is paved and no mass grading of the site will occur.
  - Contractor to install temporary barrier to protect newly installed water equipment. Barrier shall be adjusted as needed for construction in each phase.



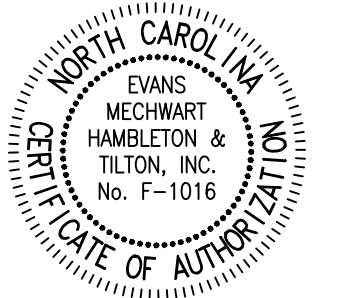
**CITY OF WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit #: \_\_\_\_\_

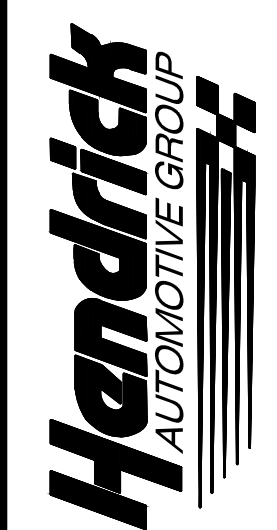
Signed: \_\_\_\_\_

Approved Construction Plan

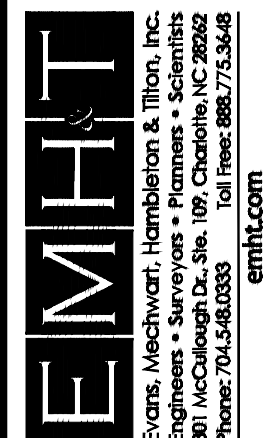
Name	Date
Planning _____	_____
Traffic _____	_____
Fire _____	_____



MARK	DATE	DESCRIPTION
A	08/16/19	Revised per City of Wilmington, New Hanover County, and CFP/UA comments
B	11/13/19	Utility Building Addition
C	01/06/20	Removal of Building 10



CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA  
FOR  
SITE IMPROVEMENT PLAN  
**MAZDA OF WILMINGTON**  
5813, 5821, & 5911 MARKET STREET  
EROSION CONTROL PLAN PHASE 3



DATE	April 17, 2019
SCALE	1" = 30'
JOB NO.	20181384
SHEET	C3.2

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LEGEND	
[Symbol]	Phasing Limits
[Symbol]	Future Right of Way
[Symbol]	Existing Right of Way
[Symbol]	Property Line
[Symbol]	Construction Phasing Line
[Symbol]	Prop. Building
[Symbol]	Prop. Heavy Duty Flexible Pavement, (Add Alternate) (Details Sheet C7.0)
[Symbol]	Prop. Curb, (Details Sheet C7.1)
[Symbol]	Prop. Security Gate
[Symbol]	Prop. Bollard Fencing
[Symbol]	Prop. Light Pole
[Symbol]	Prop. Electric Vehicle Charger
[Symbol]	Prop. Transformer
[Symbol]	Prop. Security Gate
[Symbol]	Prop. Key Pad
[Symbol]	Prop. Fire Hydrant
[Symbol]	Prop. Electric Pull Box
[Symbol]	Prop. HVAC Unit
[Symbol]	Prop. Concrete Wheel Stop
[Symbol]	Prop. Bollard
[Symbol]	Ex. HVAC Unit To Remain
[Symbol]	Ex. Bollard To Remain

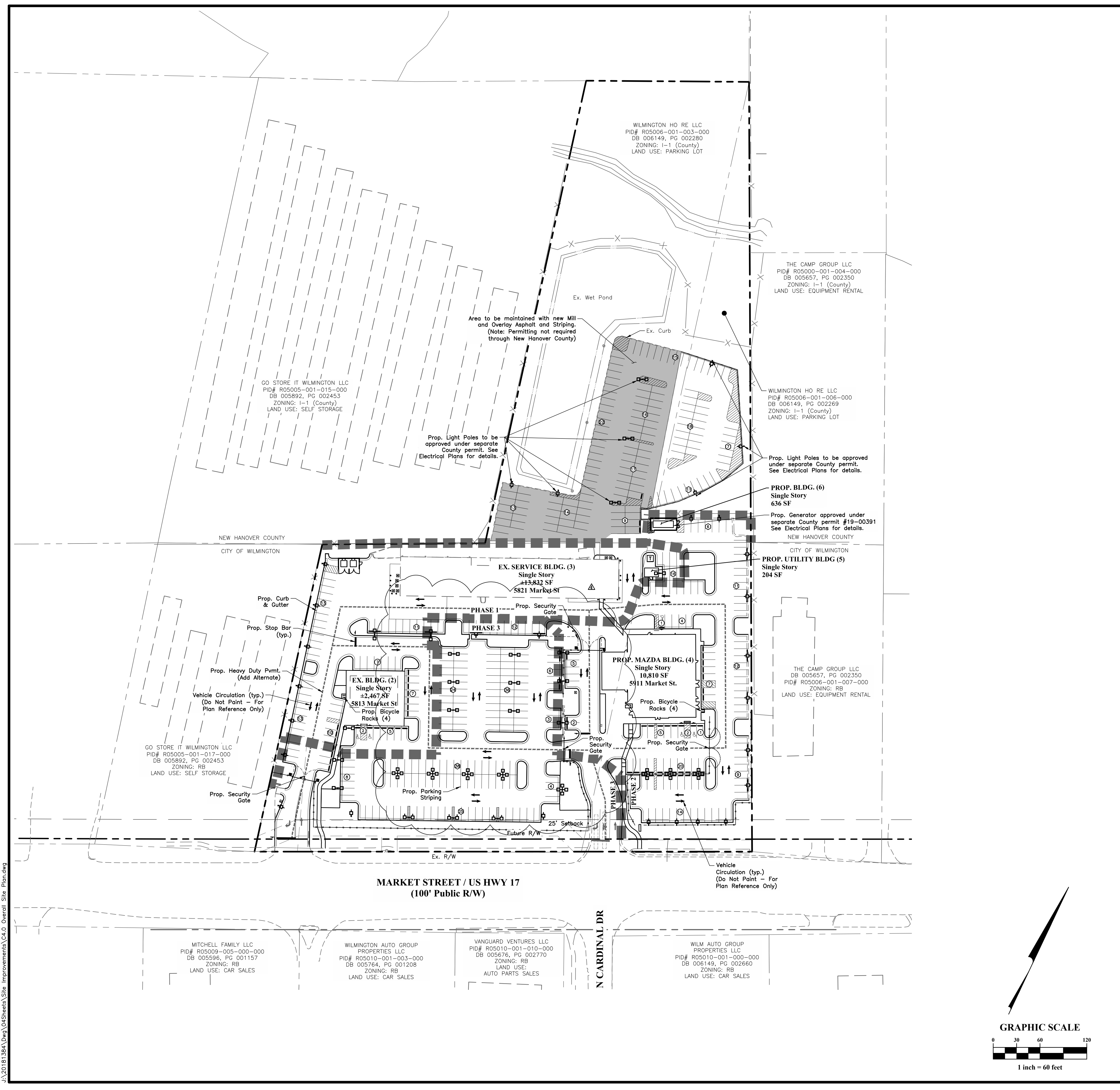
Note: See Sheet C2.0 for Overall Existing Conditions Legend.

SITE DATA	
Project Name:	Hendrick Mazda of Wilmington
Proposed Site Use:	Automotive Sales & Service
Existing Site Use:	Existing Automotive Sales & Service
Project Address:	5813, 5821, & 5911 Market Street, Wilmington, NC
Parcel ID Number:	R05006-001-001-000, R05006-001-003-000, R05006-001-005-000, R05006-001-006-000
Zoning District(s):	RB/1-1
Overlay District(s) Designation:	N/A
Building Setbacks:	Required: 25' Front Setback, 0' Sideyard Setback, 15' Rear Setback Provided: 132' Front Setback, 71' Side Setback (E), 393' Side Setback (W), 16' Rear Setback
Total Amount of Acreage within the Project Boundaries:	5.35 AC
Total Amount of Acreage within the Site Boundaries:	9.12 AC (397,267 SF)
Building Footprint Size:	Existing: 3,870 (1) + 2,467 (2) + 13,832 (3) + 3,709 (4) = 23,878 Total SF Proposed: 2,467 (2) + 13,832 (3) + 10,810 (4) + 204 (5) + 636 (6) = 27,949 Total SF
Building Lot Coverage Calculations:	Existing: 0.06 Percent Covered Proposed: 0.07 Percent Covered
Number of Units:	N/A
Existing Buildings on Site:	4
Existing Building to be Demolished:	1 (3,709 SF)
Proposed Buildings:	3 (11,650 SF)
Building Construction Type:	Type II-B
Building Height(s):	Bldg. #1 (To Be Demolished)- 13'-1", Bldg. #2- 14'-6", Bldg. #3-14'-7", Bldg. #4- 26'-0", Bldg. #5- 12'-0", Bldg. #6 12'-8"
Number of Stories:	1 (new and existing buildings)
Total Amount of Impervious Area:	Before Development: 241,742 (Pavement) + 23,878 (Bldg.) + 160 (Sidewalk) = 265,780 SF After Development: 195,782 (Pavement) + 27,949 (Bldg.) + 11,881 (Sidewalk) = 235,712 SF
*Includes 46,218 sf of pavement in rear lot on County side of property.	
Percent Impervious:	Before Development: 66.9 % After Development: 59.3 %
Off Street Parking Calculations:	Required Parking: 1 space per 500 SF of building area 27,949 / 500 = 56 spaces Proposed Parking: Standard Parking: 78 Spaces ADA Parking: 5 Spaces (2 Van Accessible) Inventory Parking: 288 Spaces Total Parking: 480 Spaces
Basis of Determination:	Wilmington Code of Ordinances, Chapter 18, Article 9, Section 18-532, Parking Schedule (Automotive dealers use)
Bicycle Parking Calculations:	Required Parking: 5 (5 for the first 25 parking spots, plus 5 per 100 additional parking spots) Proposed Parking: 8 Basis of Determination: Wilmington Code of Ordinances, Chapter 18, Article 9, Section 18-528
CAMA Land Use Classification:	Urban

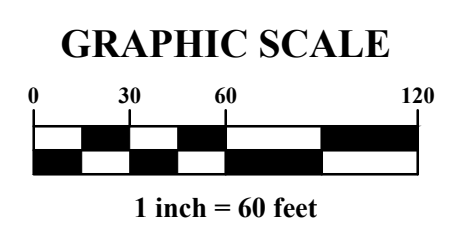
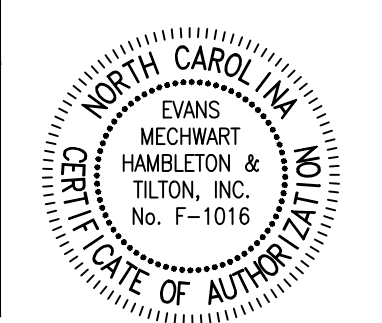
- NOTE**
- Entire site (Phase 1 and 2) shall have a 1" mill and overlay completed prior to Phase 2 completion. Contractor shall include a full site restriping.
  - Any proposed signage shall be approved under a separate sign permit process.

**ALTERNATE PRICE NOTE**  
Contractor to provide alternate bid for full depth HD paving on entire width of drives as delineated per this Sheet. Detail per Sheet C7.0.

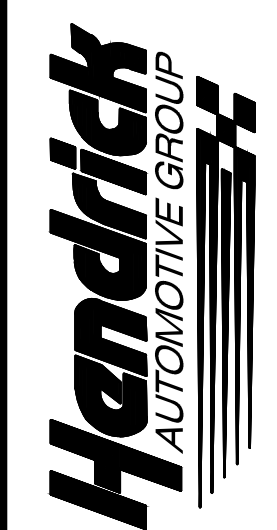
**PHASING NOTE**  
Phase Line is approximate. Contractor to coordinate with owner for location of temporary fencing, gate locations, delivery access, etc. throughout construction. Modifications to the phase line can be incorporated by the contractor with approvals by the owner/owner's representative and local agencies (City of Wilmington, NCDOT etc.) if required.



**WILMINGTON NORTH CAROLINA**  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN  
Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
Signed: \_\_\_\_\_  
Approved Construction Plan  
Name \_\_\_\_\_ Date \_\_\_\_\_  
Planning \_\_\_\_\_  
Traffic \_\_\_\_\_  
Fire \_\_\_\_\_



MARK	DATE	DESCRIPTION
1	08/16/19	Revised per City of Wilmington, New Hanover County, and CPFA comments
2	09/17/19	Revised per City of Wilmington review comments
3	11/13/19	Utility Building Addition
4	01/06/20	Removal of Building (1)



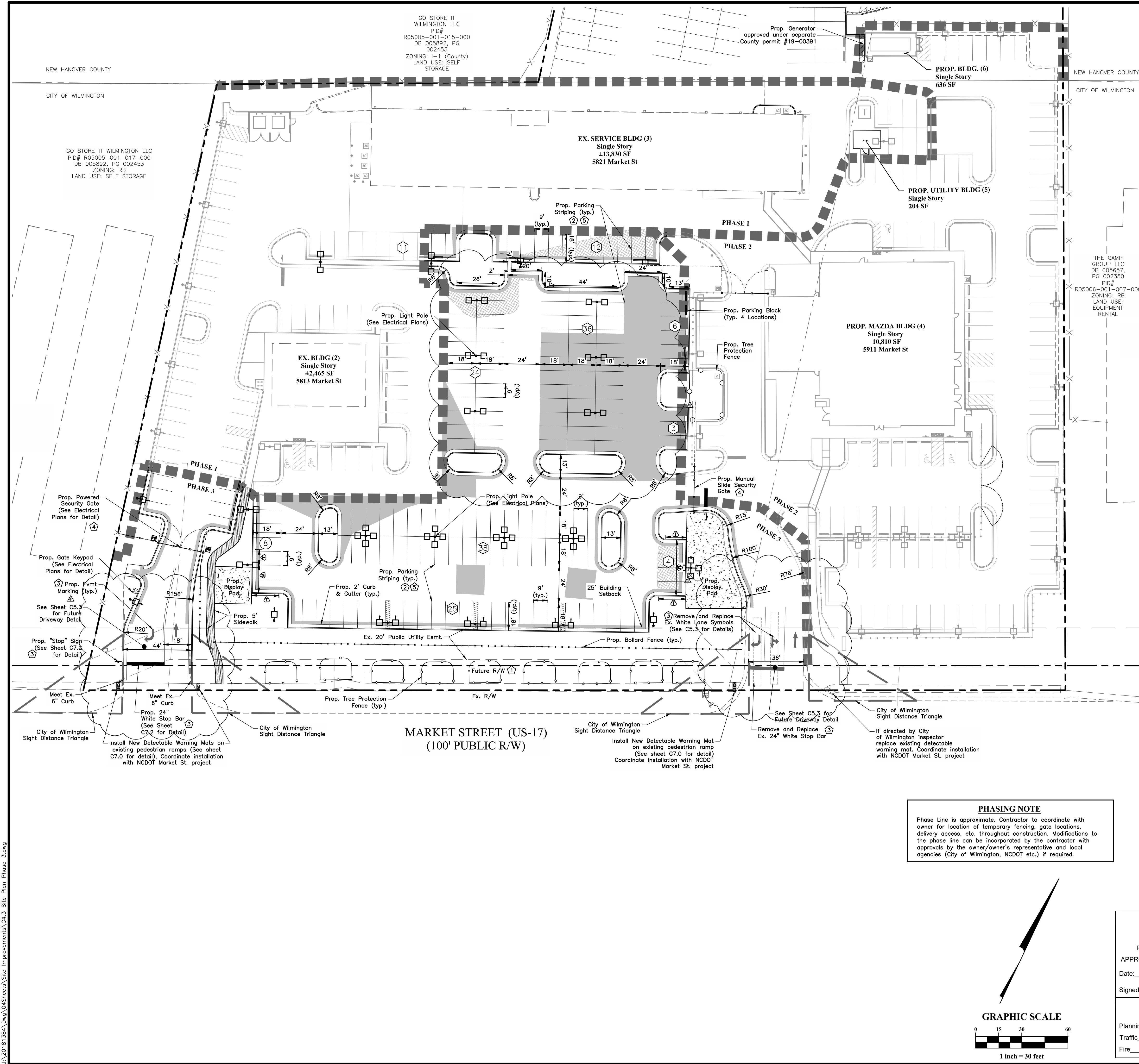
CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA  
FOR  
SITE IMPROVEMENT PLAN  
MAZDA OF WILMINGTON  
5813, 5821, & 5911 MARKET STREET  
OVERALL SITE PLAN



DATE	April 17, 2019
SCALE	1" = 60'
JOB NO.	20181384
SHEET	C4.0

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LEGEND	
[Symbol]	Phasing Limits
[Symbol]	Prop. Right of Way
[Symbol]	Prop. Building
[Symbol]	Prop. Light Duty Flexible Pavement, See Sheet C7.0
[Symbol]	Prop. Heavy Duty Rigid Pavement, See Sheet C7.0
[Symbol]	Prop. 1" Mill & Overlay
[Symbol]	Prop. Light Duty Rigid Pavement, See Sheet C7.0
[Symbol]	Prop. Sidewalk, See Sheet C7.1
[Symbol]	Prop. Additional Mill & Overlay
[Symbol]	Prop. Asphalt Wedge, See Sheet C7.0
[Symbol]	Prop. Curb
[Symbol]	Fence
[Symbol]	Bollard Fencing, See Sheet C7.0
[Symbol]	Telephone Pole (Prop. Poles by Others)
[Symbol]	Guy Wire
[Symbol]	Electric Transformer
[Symbol]	Light Pole (See Electrical Plans for Details)
[Symbol]	Proposed Spaces
[Symbol]	Display/Inventory Spaces
[Symbol]	Rolled Curb
[Symbol]	Mountable Height Curb
[Symbol]	Flush Curb
[Symbol]	Transition Curb (See note 16)
[Symbol]	Electric Vehicle Charger, See Electrical Plans for Details
[Symbol]	Prop. Keycard Kiosk
[Symbol]	Prop. Fire Hydrant
[Symbol]	Concrete Wheel Stop (See Sheet C7.0)
[Symbol]	Bicycle Rack (See Sheet C7.1)
[Symbol]	ADA Warning Domes (See Sheet C7.1)

Note: See Sheet C2.0 for the Existing Conditions Legend.

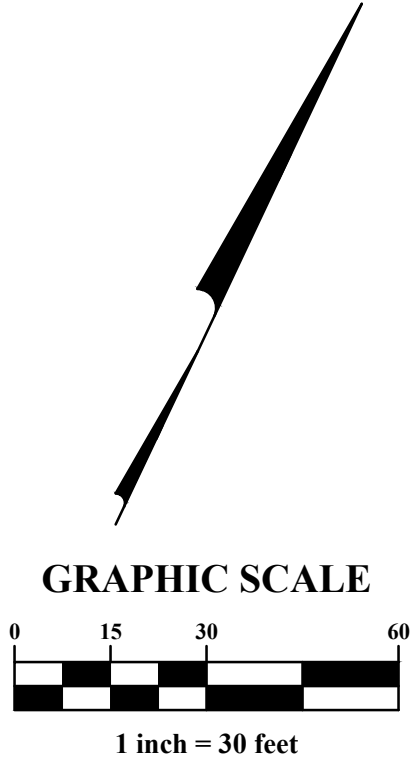
**GENERAL NOTES**

- Land Development Inspector to be given 24 hours notice prior to start of construction.
- Approval of this plan is not an authorization to grade adjacent properties. When field conditions warrant off-site grading, permission must be obtained from the affected property owners.
- In order to ensure proper drainage, keep a minimum of 1.0% slope on the curb.
- Any High-density polyethylene (HDPE) storm drainage pipe installed within existing or proposed public street right-of-way must be approved by the City's Inspector prior to any backfill being placed. Backfill material must be approved by the City Inspector prior to placement of the material within the public street right-of-way.
- There will be no on-site demolition landfills associated with this project. All demolition shall be hauled off-site and legally disposed in an approved off-site landfill.
- The current "Land Development Code" by the Wilmington Engineering Department will govern in case of conflicts in site construction specifications, details, notes standards and policies.
- Contact the Utility Company to relocate any existing utility poles. All existing facilities which conflict with the improvements under the scope of this project must be relocated at the expense of the Contractor.
- Contractor is responsible to obtain the services of a utility location contractor to field locate all utilities, both private and public, prior to commencement of work. Contractor is solely responsible to maintain utility service and communication service (internal and external) as directed by owner.
- All drives are to be private.
- All dimensions are from face of curb unless otherwise noted.
- All parking aisles are 24' wide unless otherwise noted.
- All parking stalls are 9'x18' unless otherwise noted. All curb radii are 5' unless otherwise noted.
- All curb shall be tilt out curb (See Sheet C7.1) unless otherwise noted.
- All pavement shall be Light Duty Flexible Pavement except where otherwise noted.
- Contractor shall provide turn-down anywhere asphalt and concrete or concrete base pavement meet per detail on Sheet C7.0.
- Curb shall be painted with yellow thermoplastic paint at all locations where curb transitions from full height to flush.

**KEY NOTES**

- Future Right of Way per preliminary plans for Market St improvements, dated January 24, 2017, NCDOT project U4902.
  - All parking stall striping shall be 4" white thermoplastic. City of Wilmington Traffic Engineer to approve of pavement markings prior to actual striping.
  - All pavement markings within the public right-of-way and driveways are to be thermoplastic and meet City of Wilmington and/or NCDOT standards. The stop bar and stop sign locations at the driveways shall be coordinated with the NCDOT Market St project (U-4902C). Contractor to contact City of Wilmington Traffic Engineer for coordination.
- Note the following NCDOT standard symbols should be used for the pavement markings: Right Turn=T71, Left/Thru=T73, Stop Bar=T61, White Solid Lane Line=T2
- Contractor to use caution and coordinate with private arborist to prevent damage to roots during install of bollard fencing. Modify bollard fence spacing around tree, with spacing no more than 5' center to center.
  - All pavement markings symbols shall be thermoplastic and meet MUTCD specifications.

**PHASING NOTE**  
Phase Line is approximate. Contractor to coordinate with owner for location of temporary fencing, gate locations, delivery access, etc. throughout construction. Modifications to the phase line can be incorporated by the contractor with approvals by the owner/owner's representative and local agencies (City of Wilmington, NCDOT etc.) if required.

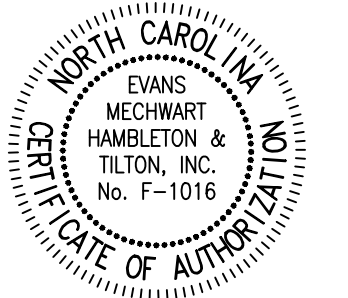


**CITY OF WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN

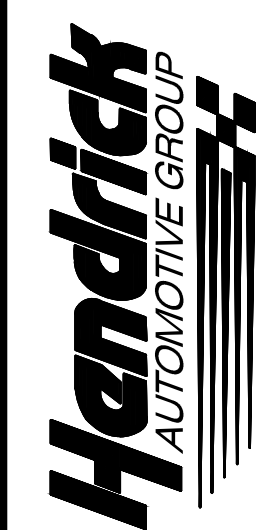
Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
Signed: \_\_\_\_\_

Approved Construction Plan

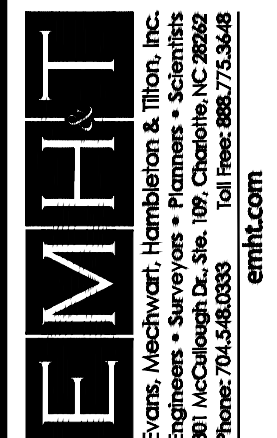
Name	Date
Planning _____	_____
Traffic _____	_____
Fire _____	_____



MARK	DATE	DESCRIPTION
1	08/16/19	Revised per City of Wilmington, New Hanover County, and CTPUA comments
2	09/17/19	Revised per City of Wilmington review comments
3	11/13/19	Utility, Building, Addition
4	01/06/20	Removal of Building(1)

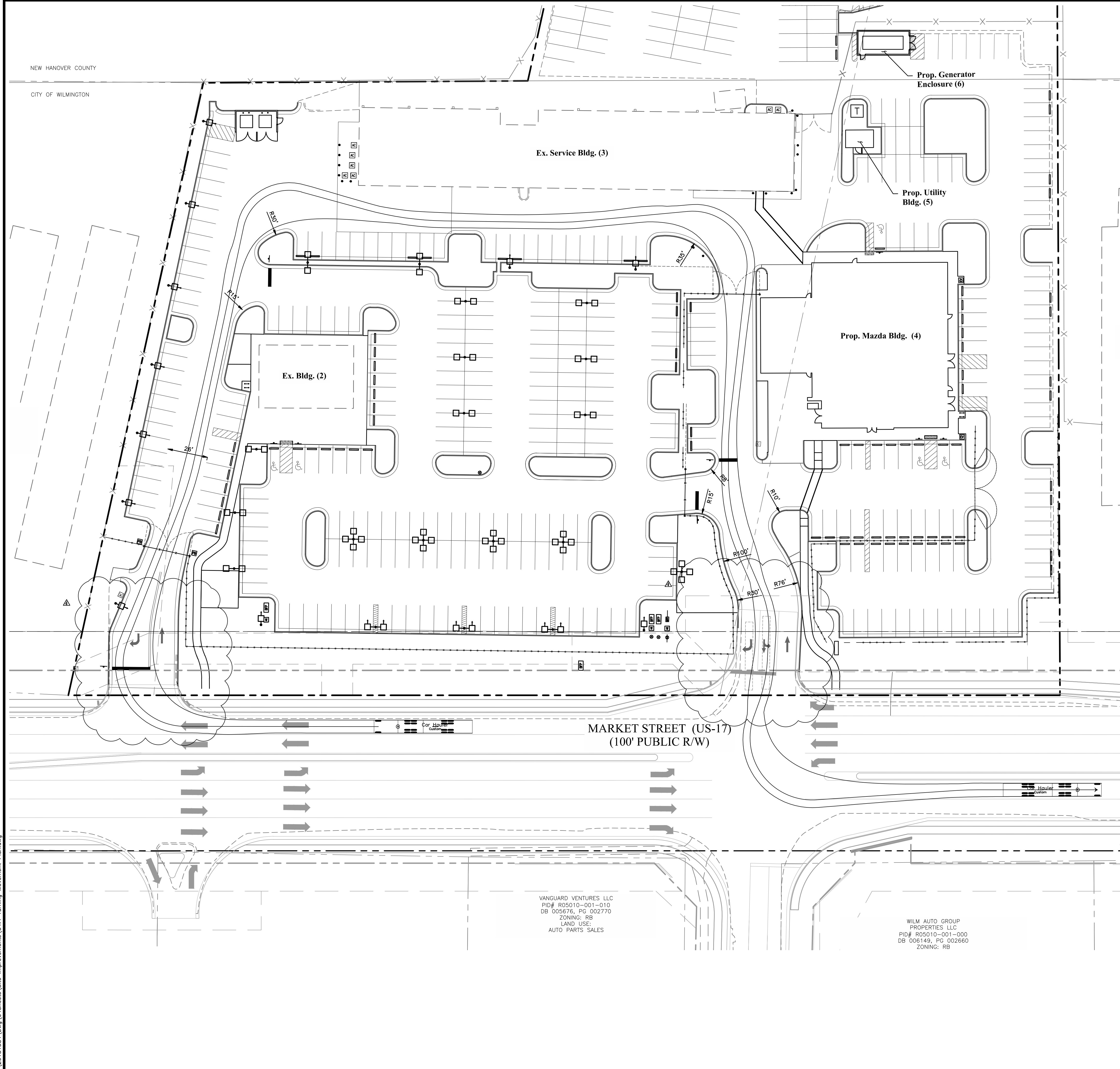


CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA  
FOR  
**MAZDA OF WILMINGTON**  
5813, 5821, & 5911 MARKET STREET  
SITE PLAN PHASE 3



DATE	April 17, 2019
SCALE	1" = 30'
JOB NO.	20181384
SHEET	C4.3

NEW HANOVER COUNTY  
CITY OF WILMINGTON

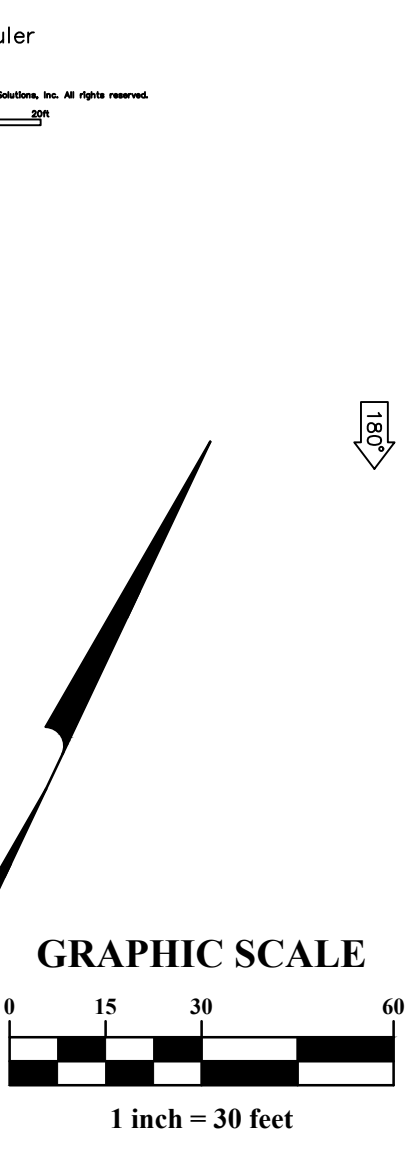
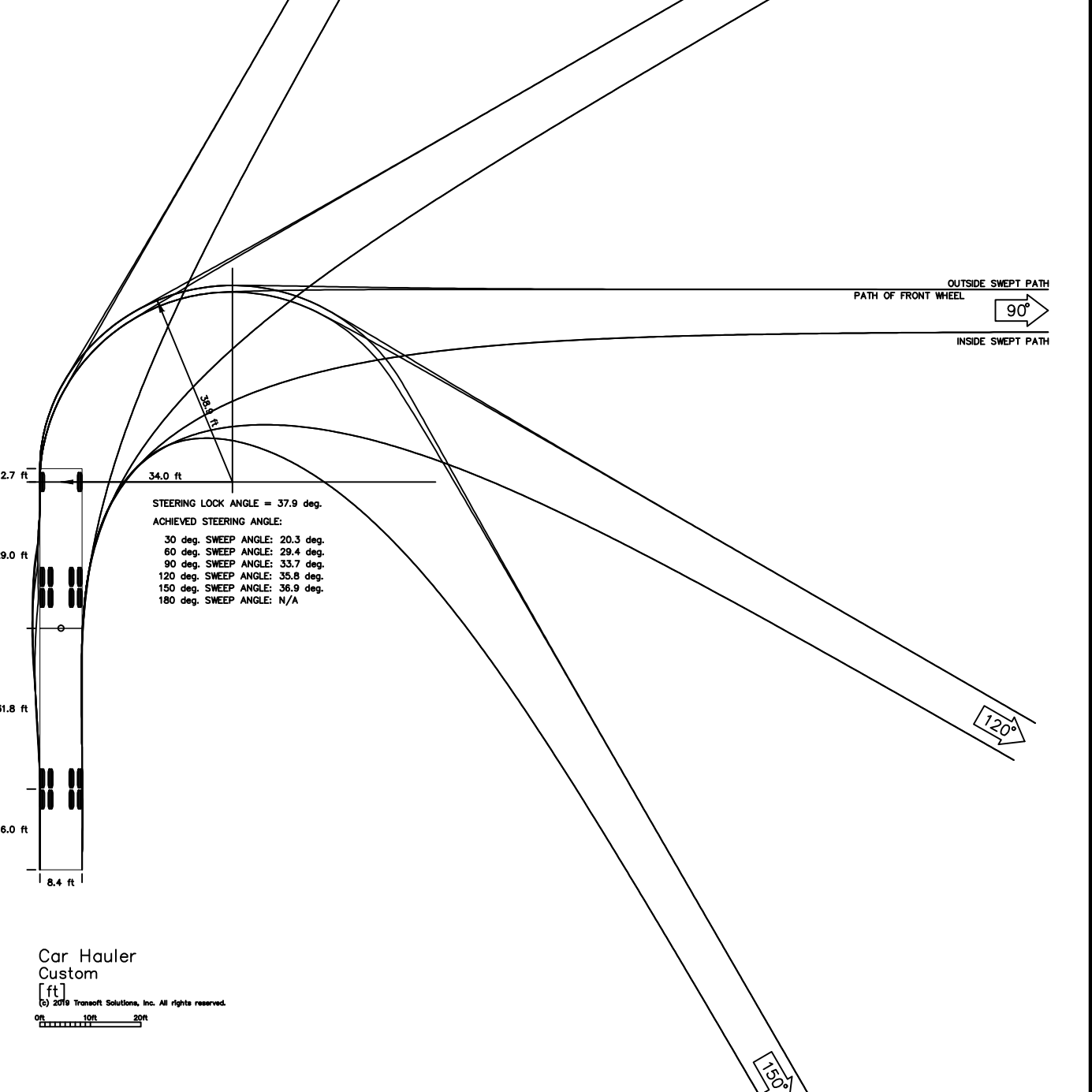
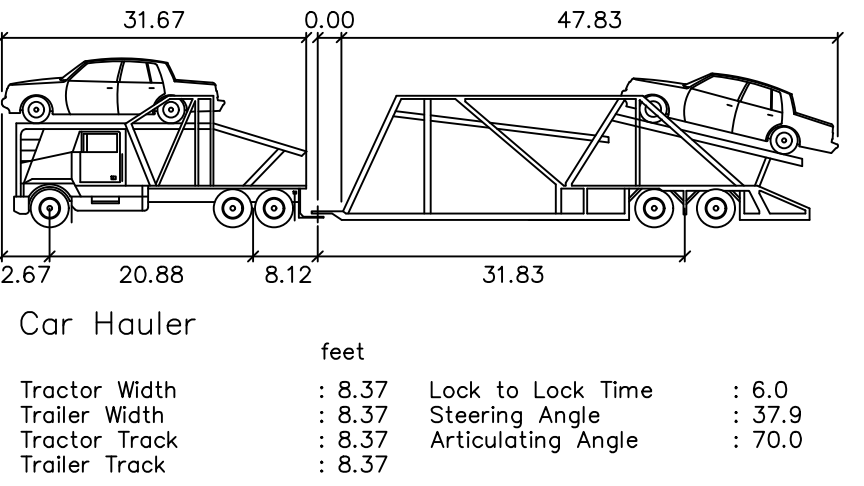


VANGUARD VENTURES LLC  
PID# R05010-001-010  
DB 005676, PG 002770  
ZONING: RB  
LAND USE:  
AUTO PARTS SALES

WILM AUTO GROUP  
PROPERTIES LLC  
PID# R05010-001-000  
DB 006149, PG 002660  
ZONING: RB

**LEGEND**

PROPOSED	EXISTING	DESCRIPTION
- - - - -	- - - - -	Right of Way
- - - - -	- - - - -	Property Line
- - - - -	- - - - -	Parcel Line
- - - - -	- - - - -	Building Setback
- - - - -	- - - - -	Easement
- - - - -	- - - - -	Building
- - - - -	- - - - -	Undisturbed Natural Area
- - - - -	- - - - -	Pavement
- - - - -	- - - - -	Limits of New Pavement
- - - - -	- - - - -	Pond
- - - - -	- - - - -	Curb, (Details Sheet C7.1)
- - - - -	- - - - -	Security Fence, (6' Tall Galvanized Chain Link Fence)
- - - - -	- - - - -	Privacy Fence, (6' Tall Wooden Fence)
- - - - -	- - - - -	Electric Transformer
- - - - -	- - - - -	HVAC Unit
- - - - -	- - - - -	Power Box
- - - - -	- - - - -	Light Pole
- - - - -	- - - - -	Power Pole



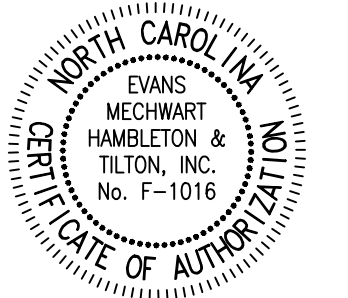
**APPROVED STORMWATER MANAGEMENT PLAN**

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

Signed: \_\_\_\_\_

**Approved Construction Plan**

Name	Date
Planning	_____
Traffic	_____
Fire	_____



MARK	DATE	DESCRIPTION
A	08/16/19	Revised per City of Wilmington, New Hanover County, and CPFA comments
B	09/17/19	Revised per City of Wilmington review comments
C	11/13/19	Utility Building Addition
D	01/09/20	Removal of Building (1)

REVISIONS

CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA  
SITE IMPROVEMENT PLAN  
FOR  
**MAZDA OF WILMINGTON**  
**5813, 5821, & 5911 MARKET STREET**  
TURNING MOVEMENT PLAN

**EMH**  
EVANS, MECHWART, HAMBLETTON & TILTON, INC.  
Engineers • Surveyors • Planners • Scientists  
1501 S. W. 8th St., Suite 200 • Tallahassee, FL 32310  
Phone: 904.538.0333 Fax: 904.538.0338  
emh.com

DATE	April 17, 2019
SCALE	1" = 30'
JOB NO.	20181384
SHEET	C4.4

GO STORE IT WILMINGTON LLC  
 PID# R05005-001-015  
 DB 005892, PG 002453  
 ZONING: I-1 (County)  
 LAND USE: SELF STORAGE

NEW HANOVER COUNTY

CITY OF WILMINGTON

GO STORE IT WILMINGTON LLC  
 PID# R05005-001-017  
 DB 005892, PG 002453  
 ZONING: RB  
 LAND USE: SELF STORAGE

GO STORE IT WILMINGTON LLC  
 PID# R05005-001-015  
 DB 005892, PG 002453  
 ZONING: I-1 (County)  
 LAND USE: SELF STORAGE

GO STORE IT WILMINGTON LLC  
 PID# R05005-001-017  
 DB 005892, PG 002453  
 ZONING: RB  
 LAND USE: SELF STORAGE

Ex. Service Bldg. (3)  
 Single Story  
 Bldg. Height: 14.6'  
 (No Sprinkler System)

Prop. Utility Bldg. (5)  
 Single Story  
 Bldg. Height: 12'  
 (No Sprinkler System)

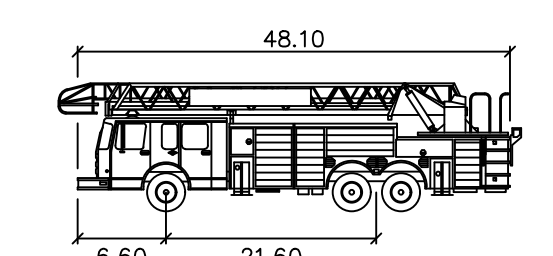
Prop. Generator Enclosure (6)  
 Single Story  
 Bldg. Height: 12'-8"  
 (No Sprinkler System)

Ex. Bldg. (2)  
 Single Story  
 Bldg. Height: 14.5'  
 (No Sprinkler System)

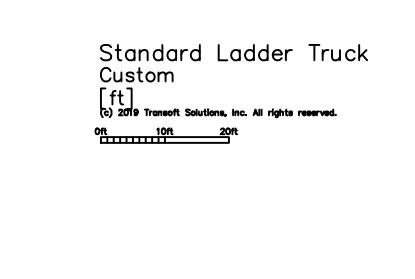
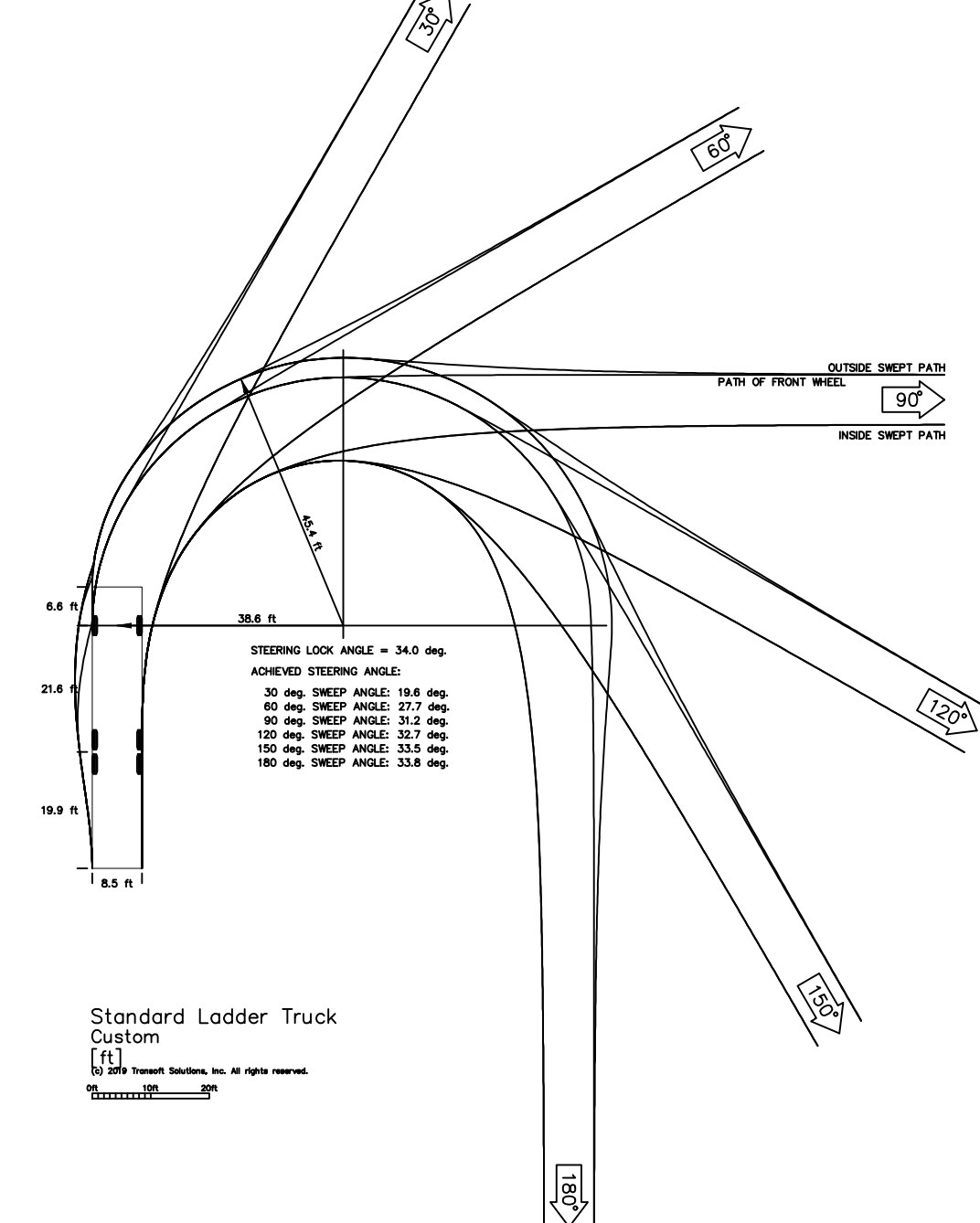
Prop. Mazda Bldg. (4)  
 Single Story  
 Bldg. Height: 26'  
 (No Sprinkler System)

LEGEND		
PROPOSED	EXISTING	
---	---	Right of Way
---	---	Property Line
---	---	Building
---	---	Pavement
---	---	Curb
---	---	Water Main
---	---	Fire Water Service
---	---	Domestic Water Service
---	---	FDC Water Service
---	---	Fire Hydrant
---	---	FDC

- NOTES**
- Contractor shall maintain an all-weather access for emergency vehicles at all times during construction.
  - New hydrants must be brought into service prior to combustible materials delivered to the job site.
  - Landscaping or parking cannot block or impede the fire hydrants. A 3-foot clear space shall be maintained around the circumference of the hydrant.
  - Additional fire protection and/or accessibility requirements may be required due to any special circumstances concerning the project.
  - Private Underground Fire Lines require a separate underground fire line permit from the Wilmington Fire and Life Safety Division 910-343-0696.
  - All isolation valves within the "Hot Box" must be electrically supervised.
  - See Sheet C7.3 for Fire Hydrant Assembly Detail.
  - Building construction type for the proposed Mazda sales building is Type II-B.
  - Contractor shall submit a Radio Signal Strength Study that demonstrates that existing emergency responder radio signal levels meet the requirement of Section 510 of the North Carolina Fire Code.
  - Contractor to coordinate maintenance of fire access with fire marshal throughout construction.
  - Maximum hose pull distance for non-sprinklered buildings shall be 300' from the nearest hydrant measured "as the truck travels".



Standard Ladder Truck  
 feet  
 Width : 8.50  
 Track : 21.60  
 Lock to Lock Time : 6.0  
 Steering Angle : 34.0



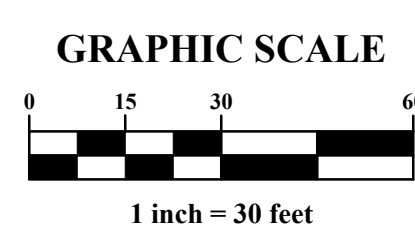
MARKET STREET (US-17)  
 (100' PUBLIC R/W)

VANGUARD VENTURES LLC  
 PID# R05010-001-010  
 DB 005676, PG 002770  
 ZONING: RB  
 LAND USE: AUTO PARTS SALES

WILM AUTO GROUP  
 PROPERTIES LLC  
 PID# R05010-001-000  
 DB 005149, PG 002660  
 ZONING: RB  
 LAND USE: CAR SALES

**KEY NOTES**

Contractor to install Knox box at all security gates. Shop drawings for Knox box shall be submitted to the City of Wilmington Fire Marshal for approval prior to installation.



**CITY OF WILMINGTON**  
 NORTH CAROLINA  
 Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

Signed: \_\_\_\_\_

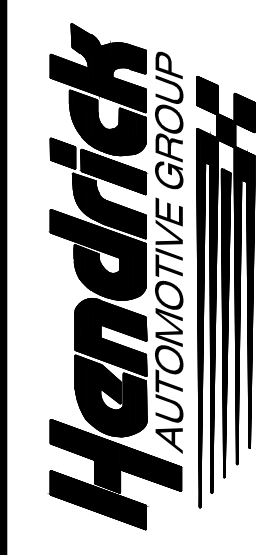
Approved Construction Plan

Name	Date

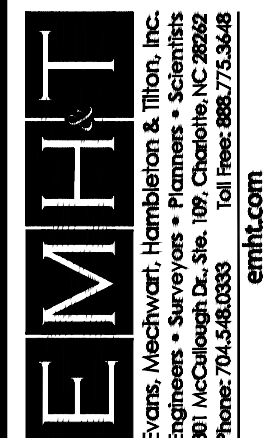


**REVISIONS**

MARK	DATE	DESCRIPTION
1	08/16/19	Revised per City of Wilmington, New Hanover County, and CPFA comments
2	09/17/19	Revised per City of Wilmington review comments
3	11/13/19	Utility Building Addition
4	12/10/19	Removal of Building (1)



CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA  
 FOR  
 MAZDA OF WILMINGTON  
 5813, 5821, & 5911 MARKET STREET  
 FIRE APPARATUS PLAN



DATE	April 17, 2019
SCALE	1" = 30'
JOB NO.	20181384
SHEET	C4.5

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ISD based on AASHTO - Geometric Design of Highways and Streets

**Case B1 - Left Turn from Stop**

$ISD = 1.47 V_{major} t_p$

$V_{major} = 50\text{mph}$

$t_p = 7.5s + 0.7s = 8.2s$  for a passenger vehicle

Calculated ISD =  $1.47(50\text{mph})(8.2s) = 603$  ft

Design ISD = 605 ft

**Case B2 - Right Turn from Stop**

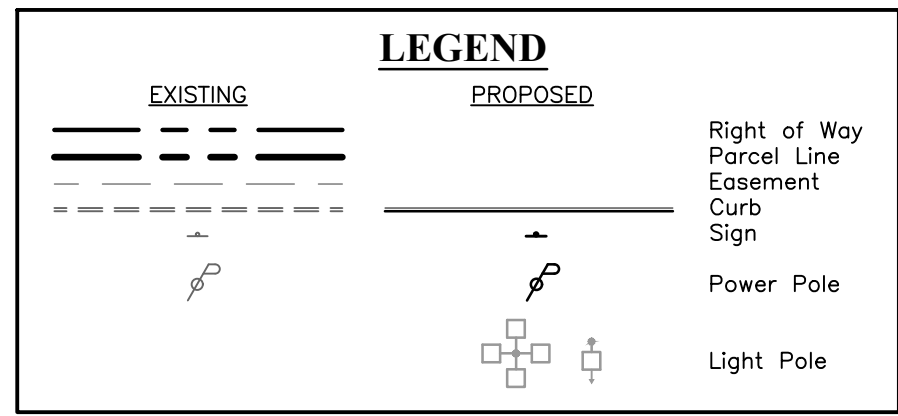
$ISD = 1.47 V_{major} t_p$

$V_{major} = 50\text{mph}$

$t_p = 6.5s$  for a passenger vehicle

Calculated ISD =  $1.47(50\text{mph})(6.5s) = 478$  ft

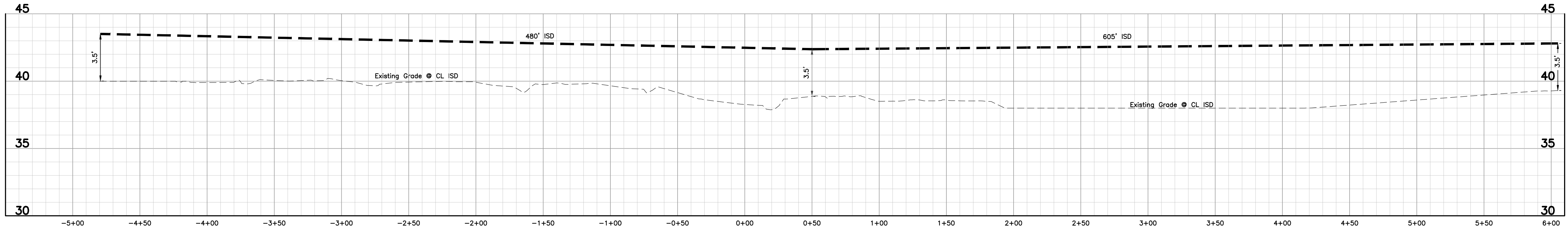
Design ISD = 480 ft



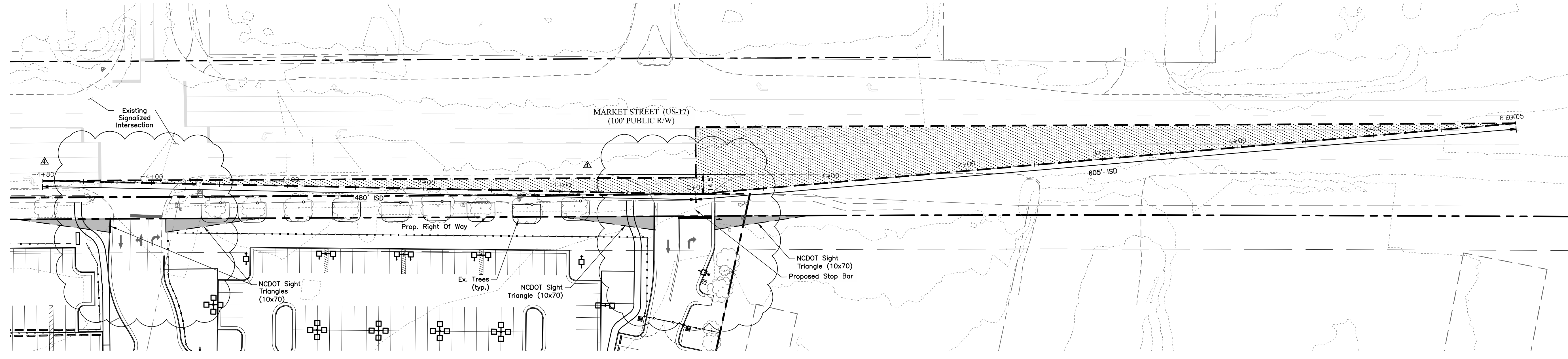
Notes:

- Contractor to coordinate with NCDOT inspector for all traffic control. Field modifications may be required.
- The existing western driveway is located at an signalized intersection and therefore intersection sight distance is not shown on this plan.

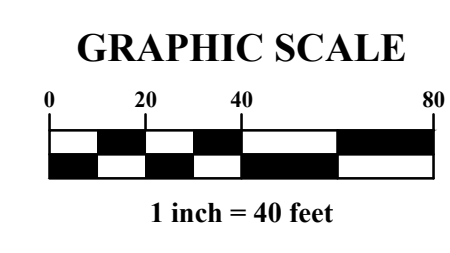
Posted Speed Limit = 45 MPH (Market Street/US Hwy. 17)  
Design Speed Limit = 50 MPH



**INTERSECTION SIGHT DISTANCE PROFILE**  
Horizontal Scale: 1" = 40'  
Vertical Scale: 1" = 4'



**INTERSECTION SIGHT DISTANCE PLAN**  
Scale: 1" = 40'



**CITY OF WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division

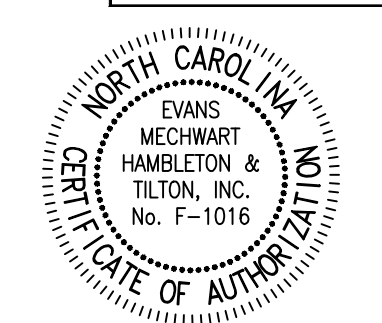
APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

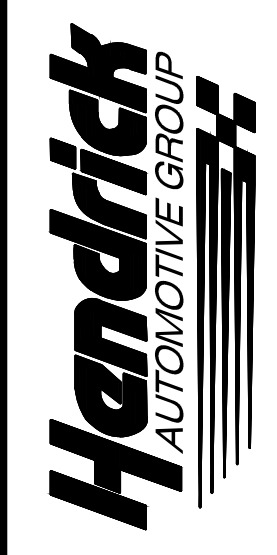
Signed: \_\_\_\_\_

Approved Construction Plan

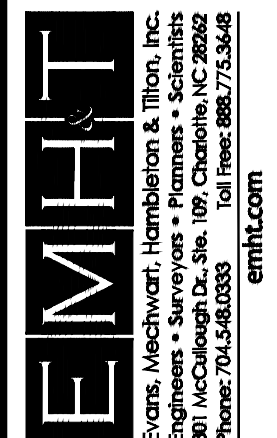
Name	Date
Planning	_____
Traffic	_____
Fire	_____



MARK	DATE	DESCRIPTION
Δ	08/16/19	Revised per City of Wilmington, New Hanover County, and CPWA comments
Δ	09/17/19	Revised per City of Wilmington review comments
Δ	11/13/19	Utility, Building, Addition
Δ	05/06/20	Removal of Building (1)



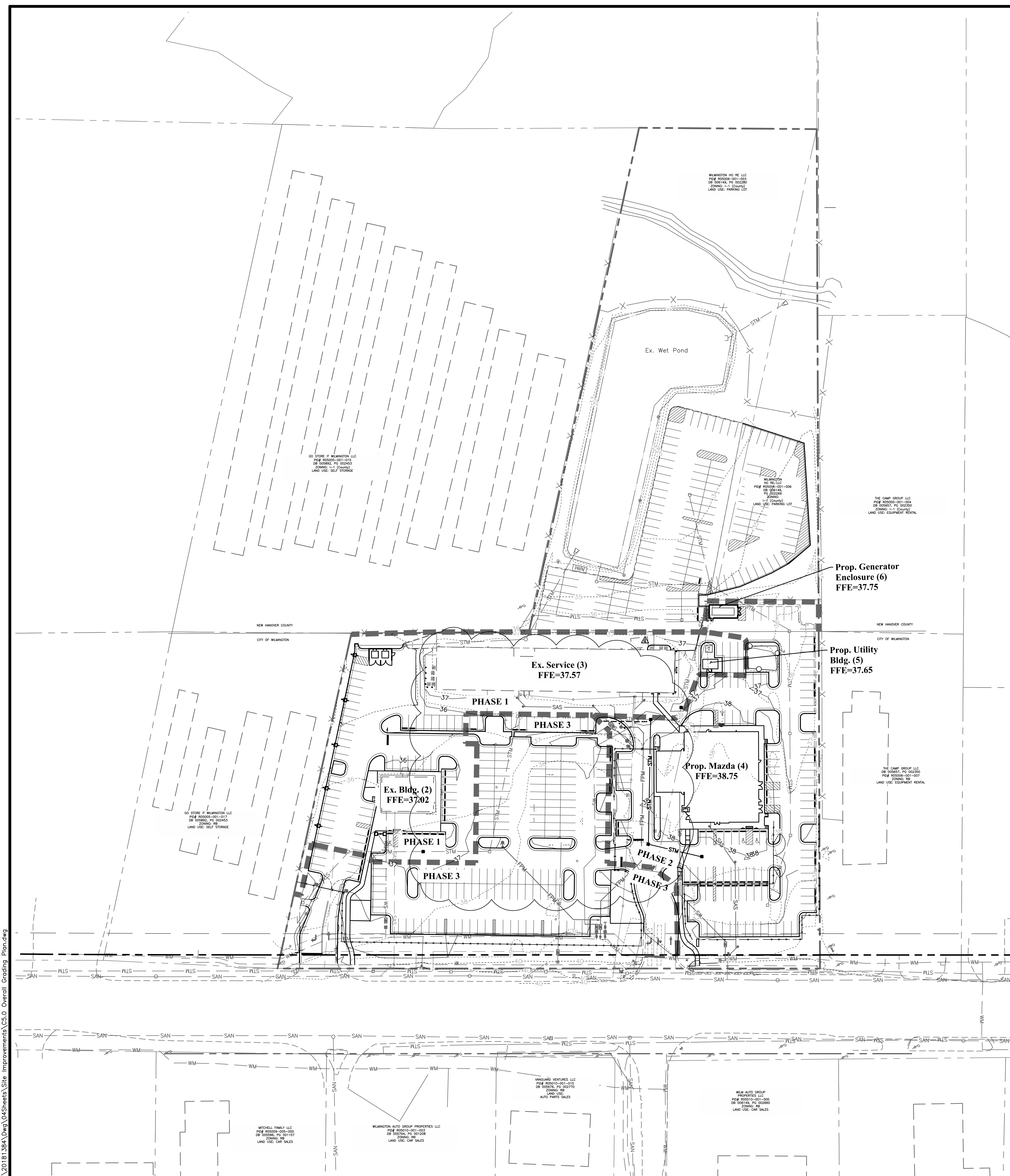
CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA  
SITE IMPROVEMENT PLAN  
FOR  
**MAZDA OF WILMINGTON**  
5813, 5821, & 5911 MARKET STREET  
INTERSECTION SIGHT DISTANCE PLAN



DATE	April 17, 2019
SCALE	As Noted
JOB NO.	20181384
SHEET	C4.6

J:\20181384\Drawings\04\Sheets\Site Improvements\C4.6 Intersection Sight Distance Plan.dwg

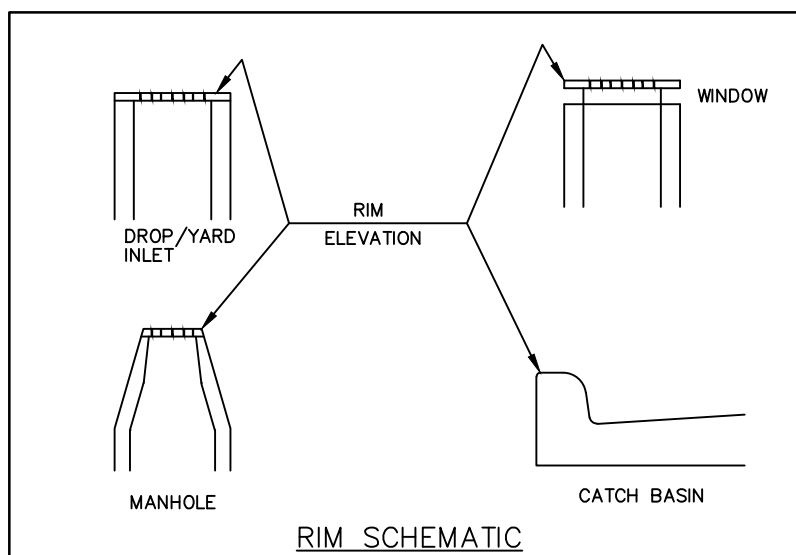
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LEGEND	
	Right of way
	Property Line
	Easement
	Contours
	Building
	Pavement
	Curb
	Fence
	Ballard Fencing
	Prop. Rip Rap
	Flow Arrow
	Electric Transformer
	Flood Routing Arrow
	Phasing Limits

- NOTES**
- All curb elevations are top back of curb unless otherwise noted.
  - All contours and spot elevations reflect finished grades.
  - The contractor shall immediately report to owner any discrepancies found between actual field conditions and construction documents and shall wait for instruction prior to proceeding.
  - The contractor shall blend new earthwork smoothly to transition back to existing grade, including any grading work performed in the right-of-way.
  - Limits of clearing shown on grading plan are based upon the approximate cut and fill slope limits, or other grading requirements.
  - Limits of Disturbance, see sheets C3.1 & C3.2.
  - The contractor shall insure positive drainage so that runoff will drain by gravity flow across new pavement areas to new or existing drainage inlets or sheet overland.
  - There shall be no standing water before permanent seeding of parcels.
  - Sediment and erosion control measures shall be maintained throughout this development.
  - All proposed storm sewer pipe shall be Class IV RCP unless otherwise noted.
  - All Underdrains for Roof Drain/Down Spout Connections shall be HDPE.
  - Reference Sheets C4.2 & C4.3 for locations of flush, transition, modified, rolled, and full height curb and gutter.
  - See Site and Utility Plans for Easement and Tree Save locations.
  - Contractor shall maintain existing wet pond per permit conditions.
  - Contractor shall assure wet pond outfall is properly maintained and free of any debris and/or encumbrances.
  - Contractor shall inspect and maintain all existing stormwater piping and structures to assure system is functioning per design standards.

**ADA ACCESSIBLE ROUTE INSTRUCTIONS TO CONTRACTOR**  
 Contractors shall exercise appropriate care and precision in construction of ADA accessible components indicated on this sheet. These components, as constructed, must comply with State and Federal accessibility rules and regulations. Finished surfaces along the accessible route of travel from parking space, public transportation, pedestrian access, inter-building access, to points of accessible building entrance/egress, shall comply with ADA & North Carolina building code requirements. These include, but are not limited to the following:  
**Parking spaces and parking aisles** - slope shall not exceed 2.0% in any direction.  
**Curb ramps** - slope shall not exceed 8.3% for a maximum of six (6) feet.  
**Landings** - shall be provided at each end of ramps, shall provide positive drainage, and shall not exceed 2.0% slope in any direction.  
**Path of travel along accessible route** - shall provide a 36 inch or greater unobstructed width of travel, (car overhangs cannot reduce this minimum width), the slope shall be no greater than 5.0% in the direction of travel, and shall not exceed 2.0% in cross slope.  
**Doorways** - shall have a "level" landing area on the exterior side up the door that is sloped no more than 2.0% for positive drainage. This landing area shall be no less than 60 inches (5 feet) long, except where otherwise permitted by ADA standards for alternative doorway opening conditions (see ICC/ANSI A117.1-2003 and other references incorporated by code).  
 Contractor to warp existing asphalt as necessary to ensure slopes are ADA accessible (see note this sheet). Contractor shall ensure no ponding occurs due to pavement modifications.

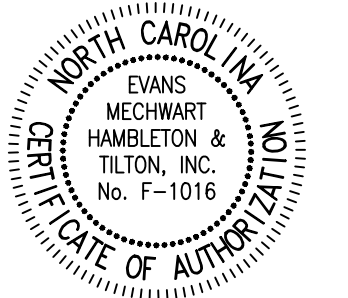
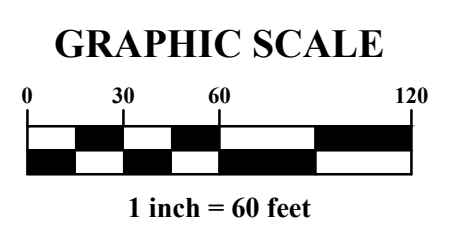


**PHASING NOTE**  
 Phase Line is approximate. Contractor to coordinate with owner for location of temporary fencing, gate locations, delivery access, etc. throughout construction. Modifications to the phase line can be incorporated by the contractor with approve by the owner/owner's representative and local agencies (City of Wilmington, NCDOT etc.) if required.

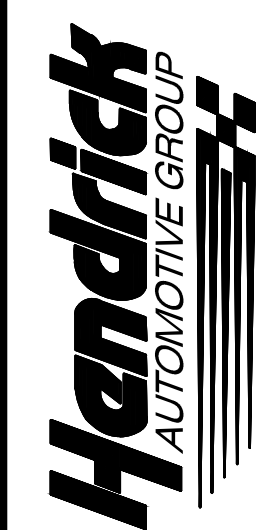


APPROVED STORMWATER MANAGEMENT PLAN  
 Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
 Signed: \_\_\_\_\_

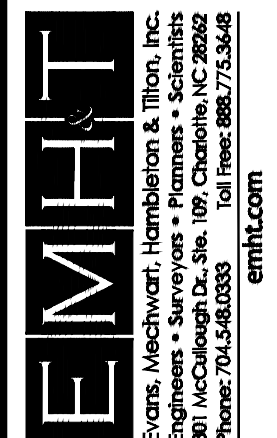
Approved Construction Plan  
 Name \_\_\_\_\_ Date \_\_\_\_\_  
 Planning \_\_\_\_\_  
 Traffic \_\_\_\_\_  
 Fire \_\_\_\_\_



MARK	DATE	DESCRIPTION
A	08/16/19	Revised per City of Wilmington, New Hanover County, and CTPUA comments
A	09/17/19	Utility Building Addition
A	11/21/19	Utility Building Addition
A	12/16/19	Removal of Building (1)

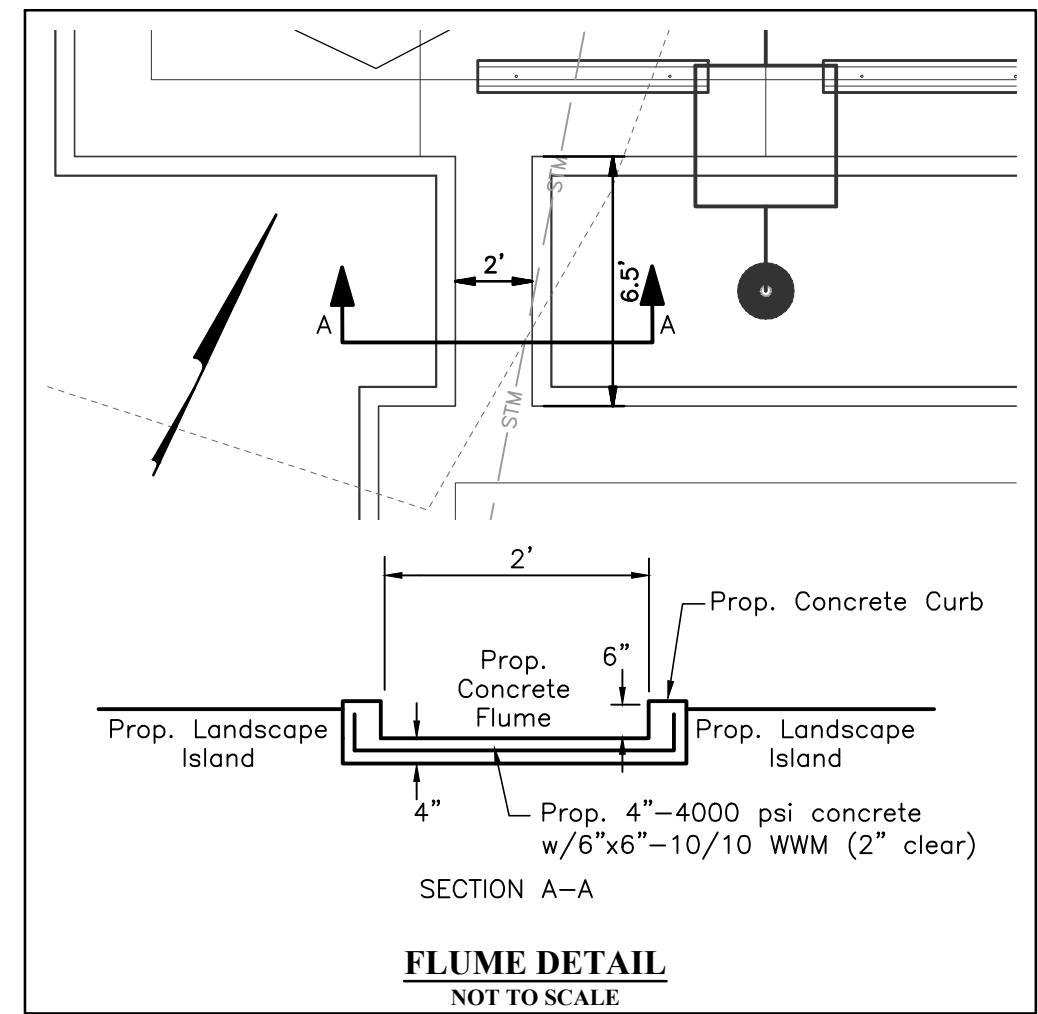
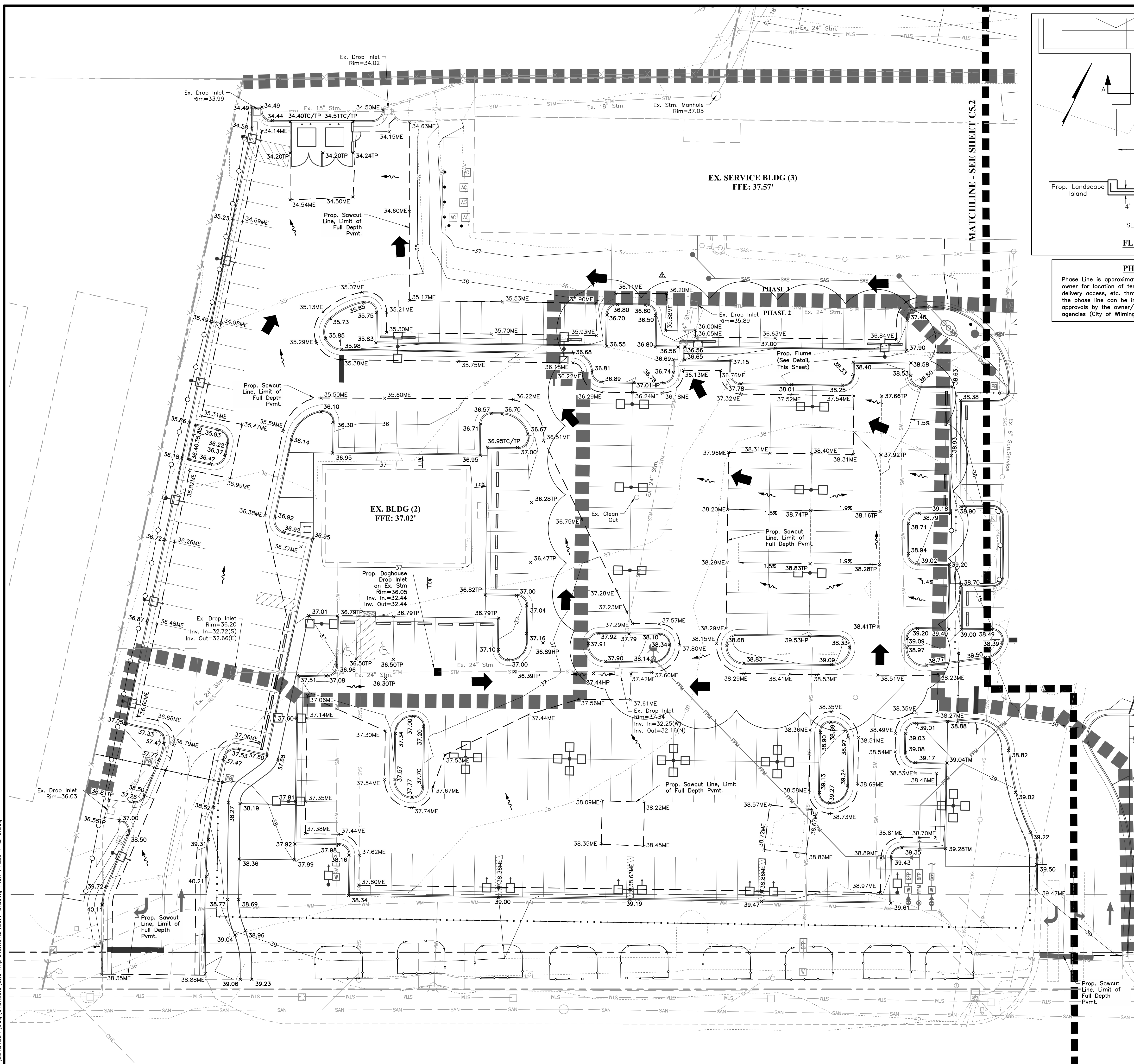


CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA  
 FOR  
**MAZDA OF WILMINGTON**  
**5813, 5821, & 5911 MARKET STREET**  
 OVERALL GRADING PLAN



DATE	April 17, 2019
SCALE	1" = 60'
JOB NO.	20181384
SHEET	C5.0

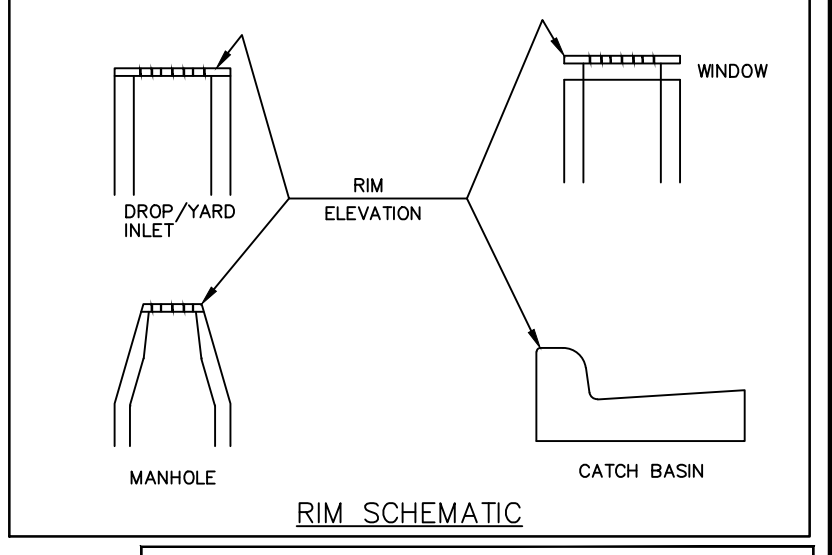
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**PHASING NOTE**  
Phase Line is approximate. Contractor to coordinate with owner for location of temporary fencing, gate locations, delivery access, etc. throughout construction. Modifications to the phase line can be incorporated by the contractor with approvals by the owner/owner's representative and local agencies (City of Wilmington, NCDOT etc.) if required.

LEGEND	
	Right of way
	Property Line
	Easement
	Contours
	Building
	Pavement
	Curb
	Fence
	Ballard Fencing
	Prop. Rip Rap
	Sanitary Cleanout
	Sanitary Service
	Storm Sewer
	Domestic Water Main
	Fire Hydrant Service
	FDC Connection
	Fire Hydrant
	Fiber Optic
	Spot Elevation
	Match Existing Spot Elevation
	Top of Pavement Elevation
	Finished Grade
	Top Back of Modified Curb
	Top of Curb Spot Elevation
	Flow Arrow
	Electric Transformer
	Flood Routing Arrow
	Phasing Limits
	Sawcut Line

- NOTES**
- All curb elevations are top back of curb unless otherwise noted.
  - All contours and spot elevations reflect finished grades.
  - The contractor shall immediately report to the Engineer any discrepancies found between actual field conditions and construction documents and shall wait for instruction prior to proceeding.
  - The contractor shall blend new earthwork smoothly to transition back to existing grade, including any grading work performed in the right-of-way.
  - Limits of clearing shown on grading plan are based upon the approximate cut and fill slope limits, or other grading requirements.
  - Limits of Disturbance, see sheets C3.0, C3.1 & C3.2.
  - The contractor shall insure positive drainage so that runoff will drain by gravity flow across new pavement areas to new or existing drainage inlets or sheet overland.
  - There shall be no standing water before permanent seeding of parcels.
  - Sediment and erosion control measures shall be maintained throughout this development.
  - All proposed storm sewer pipe shall be Class III RCP unless otherwise noted.
  - All Underdrains for Roof Drain/Down Spout Connections shall be HDPE.
  - Reference Sheets C4.1, C4.2, & C4.3 for locations of flush, transition, modified, rolled, and full height curb and gutter.
  - See Sheets C2.0-C2.3 for all existing underground utilities. Contractor shall use appropriate care to protect existing utilities when saw cutting and performing work in those areas.
  - See Sheets C6.0-C6.4 for all proposed utilities.
  - Shop drawings for all storm structures shall be submitted to the design engineer for approval prior to any storm installation.
- ADA ACCESSIBLE ROUTE INSTRUCTIONS TO CONTRACTOR**  
Contractors shall exercise appropriate care and precision in construction of ADA accessible components indicated on this sheet. These components, as constructed, must comply with State and Federal accessibility rules and regulations. Finished surfaces along the accessible route of travel from parking spaces, public transportation, pedestrian access, inter-building access, to points of accessible building entrance/egress, shall comply with ADA & North Carolina building code requirements. These include, but are not limited to the following:  
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**Curb ramps** - slope shall not exceed 8.3% for a maximum of six (6) feet.  
**Landings** - shall be provided at each end of ramps, shall provide positive drainage, and shall not exceed 2.0% slope in any direction.  
**Path of travel along accessible route** - shall provide a 36 inch or greater unobstructed width of travel, (car overhangs cannot reduce this minimum width), the slope shall be no greater than 5.0% in the direction of travel, and shall not exceed 2.0% in cross slope.  
**Doorways** - shall have a "level" landing area on the exterior side up the door that is sloped no more than 2.0% for positive drainage. This landing area shall be no less than 60 inches (5 feet) long, except where otherwise permitted by ADA standards for alternative doorway opening conditions (see ICC/ANSI A117.1-2003 and other references incorporated by code).  
Contractor to warp existing asphalt as necessary to ensure slopes are ADA accessible (see note this sheet). Contractor shall ensure no ponding occurs due to pavement modifications.



**WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

Signed: \_\_\_\_\_

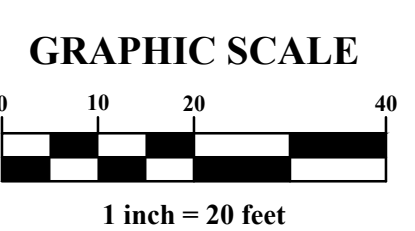
Approved Construction Plan

Name \_\_\_\_\_ Date \_\_\_\_\_

Planning \_\_\_\_\_

Traffic \_\_\_\_\_

Fire \_\_\_\_\_



REVISIONS		
MARK	DATE	DESCRIPTION
A	08/16/19	Revised per City of Wilmington, New Hanover County, and CPFA comments
B	09/17/19	Revised per City of Wilmington review comments
C	11/13/19	Utility Building Addition
D	10/20/20	Removal of Building (1)

**Hendrich**  
AUTOMOTIVE GROUP

CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA  
FOR  
**MAZDA OF WILMINGTON**  
5813, 5821, & 5911 MARKET STREET  
GRADING PLAN PHASE 1 & 3

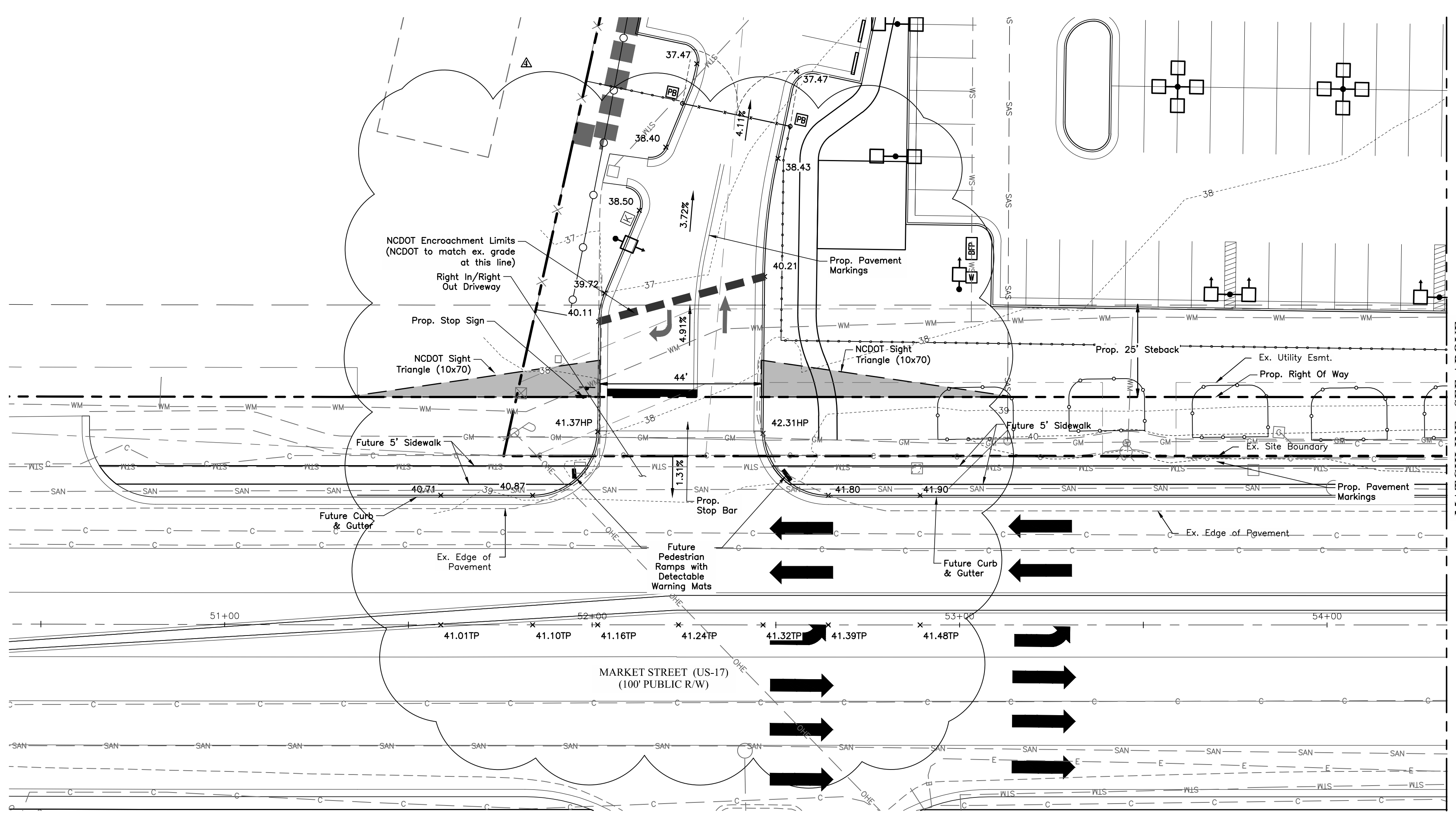
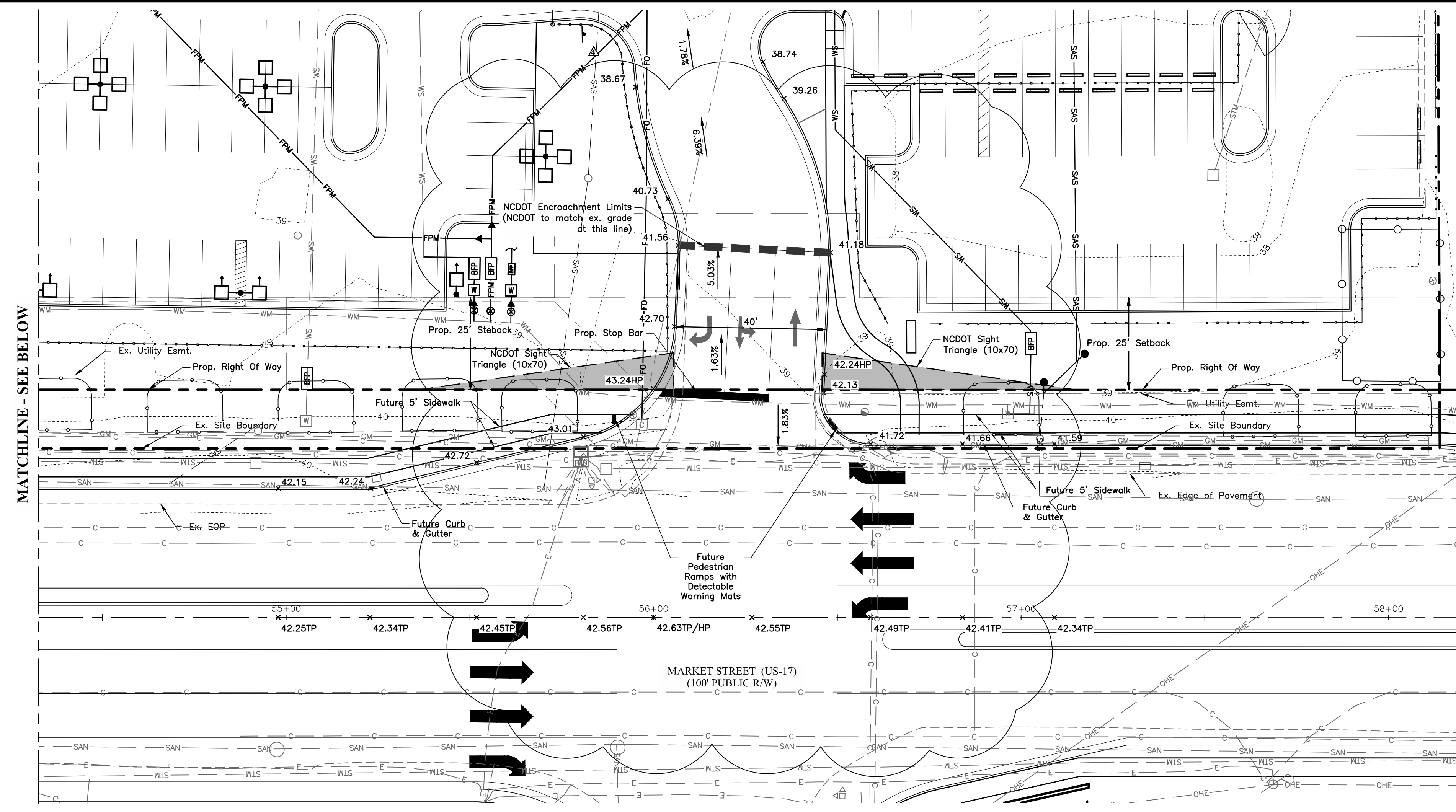
**EMH**  
Evans, Mechwart & Tilton, Inc.  
Engineers - Surveyors - Planners - Scientists  
Professional Seal No. 90258/0333  
emh.com

DATE: April 17, 2019

SCALE: 1" = 20'

JOB NO.: 20181384

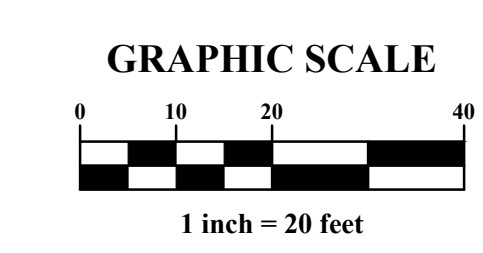
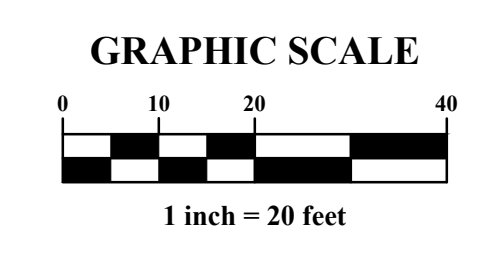
SHEET: C5.1



PROPOSED		EXISTING	
---	Right of Way	---	Property Line
---	Building Setback	---	Parcel Line
---	Essement	---	Building Setback
---	Contours	---	Pavement
---	Building	---	Curb Detail, See Sheet C7.1
---	Fence	---	Power Pole
---	Sign	---	Light Pole
---	Spot Elevation	---	Spot Elevation
---	Top of Wall Elevation	---	Spot Elevation Match Existing
---	Top of Pavement Elevation	---	Top of Pavement Elevation
---	Finish Grade	---	Flow Line Elevation
---	Flow Arrow	---	Flow Arrow

**NOTES**

- Reference TIP Project: U-4902C for all pavement elevations along Market Street (US 17 Business). Plans grades shown based upon preliminary roadway design dated January 17, 2019.
- Contractor shall contact NCDOT traffic services prior to any work near the signalized intersection at 910-341-2200.



**WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division

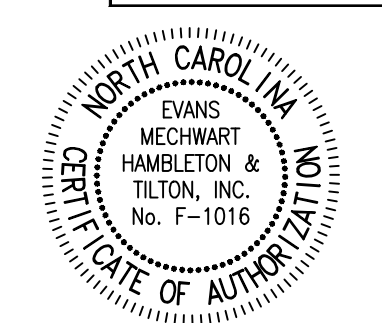
APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

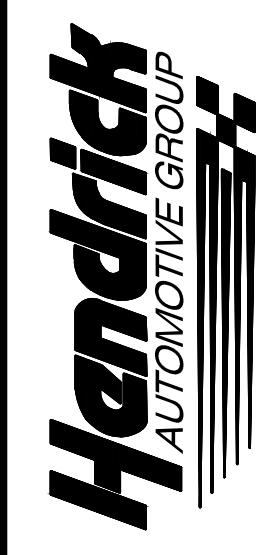
Signed: \_\_\_\_\_

Approved Construction Plan

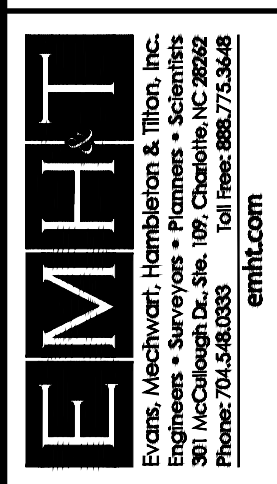
Name	Date
Planning	_____
Traffic	_____
Fire	_____



MARK	DATE	DESCRIPTION
1	08/16/19	Revised per City of Wilmington, New Hanover County, and CPFA comments
2	09/17/19	Revised per City of Wilmington review comments
3	11/21/19	Utility, Building, Addition
4	01/17/20	Removal of Building(1)



CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA  
SITE IMPROVEMENT PLAN  
FOR  
**MAZDA OF WILMINGTON**  
5813, 5821, & 5911 MARKET STREET  
FUTURE DRIVEWAY DETAIL

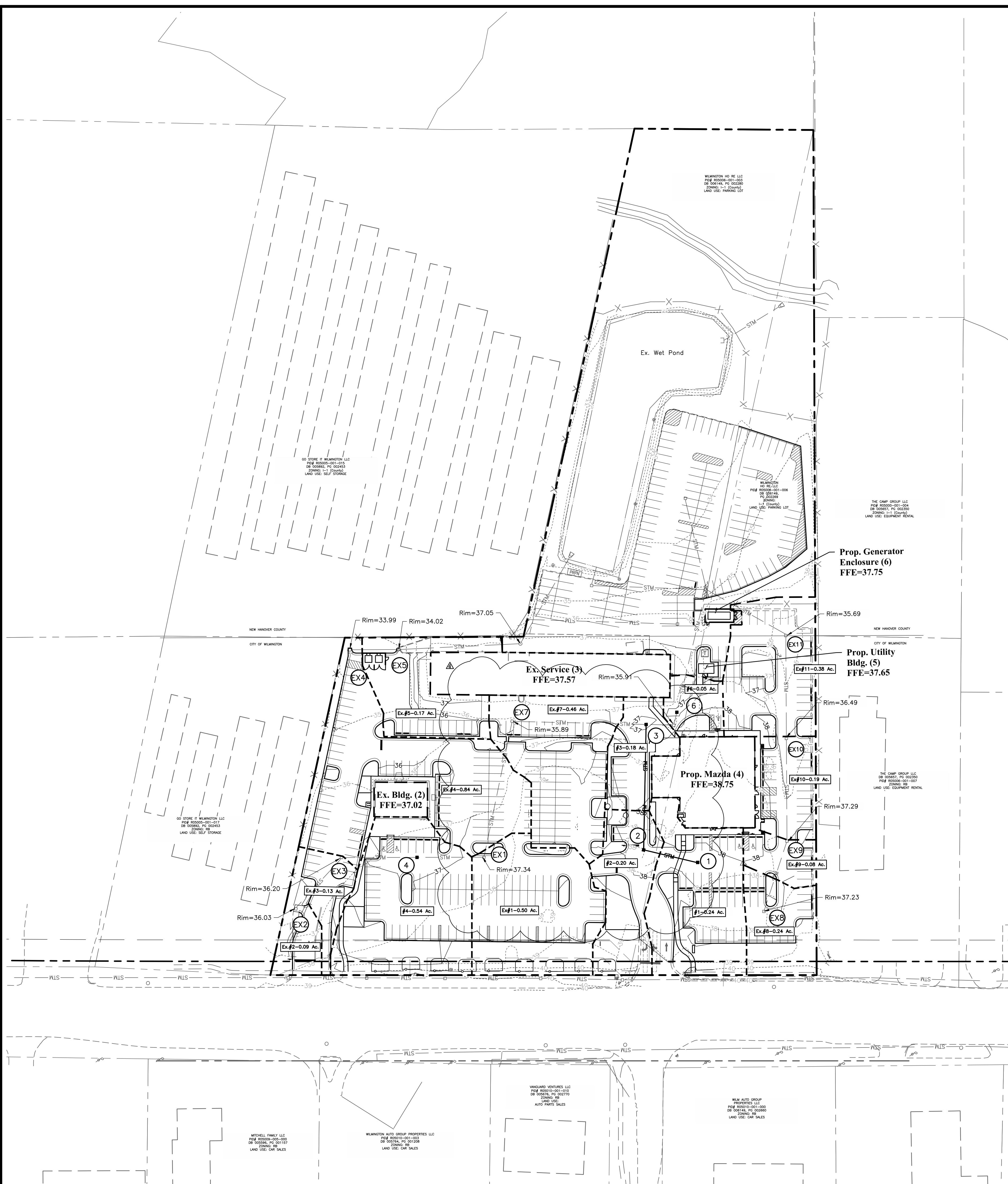


DATE	SCALE	JOB NO.	SHEET
April 17, 2019	As Noted	20181384	C5.3

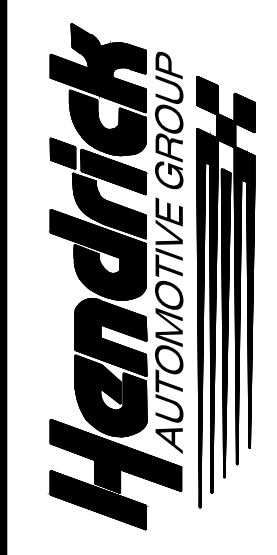
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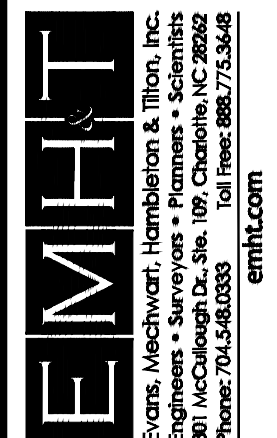
LEGEND	
---	Property Line
---	Ex. Contours
---	Prop. Contours
---	Ex. Storm Sewer
---	Prop. Storm Sewer
■	Storm Catch Basin
---	Storm Structure Tributary Boundary
⊗	Storm Structure Number



REVISIONS		
MARK	DATE	DESCRIPTION
A	08/16/19	Revised per City of Wilmington, New Hanover County, and CPWA comments
B	09/17/19	Revised per City of Wilmington review comments
C	11/13/19	Utility Building Addition
D	05/06/20	Removal of Building (1)



CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA  
 FOR  
 SITE IMPROVEMENT PLAN  
 MAZDA OF WILMINGTON  
 5813, 5821, & 5911 MARKET STREET  
 DRAINAGE AREA PLAN



**CITY OF WILMINGTON**  
 NORTH CAROLINA  
 Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

Signed: \_\_\_\_\_

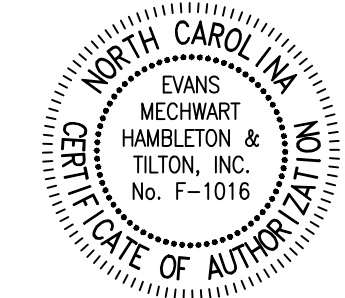
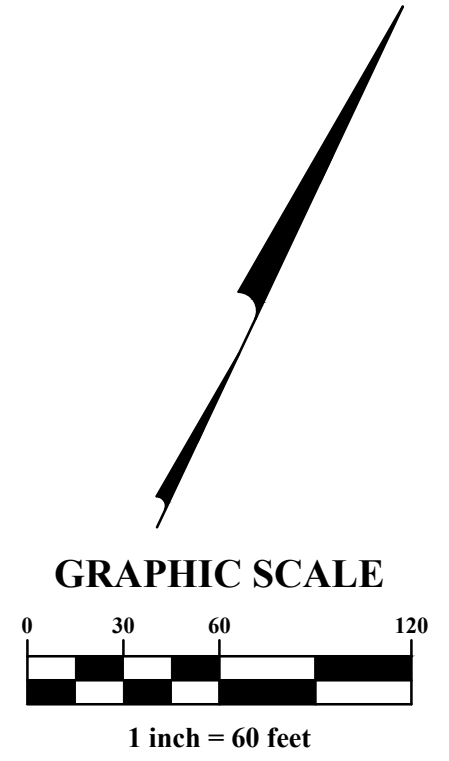
Approved Construction Plan

Name \_\_\_\_\_ Date \_\_\_\_\_

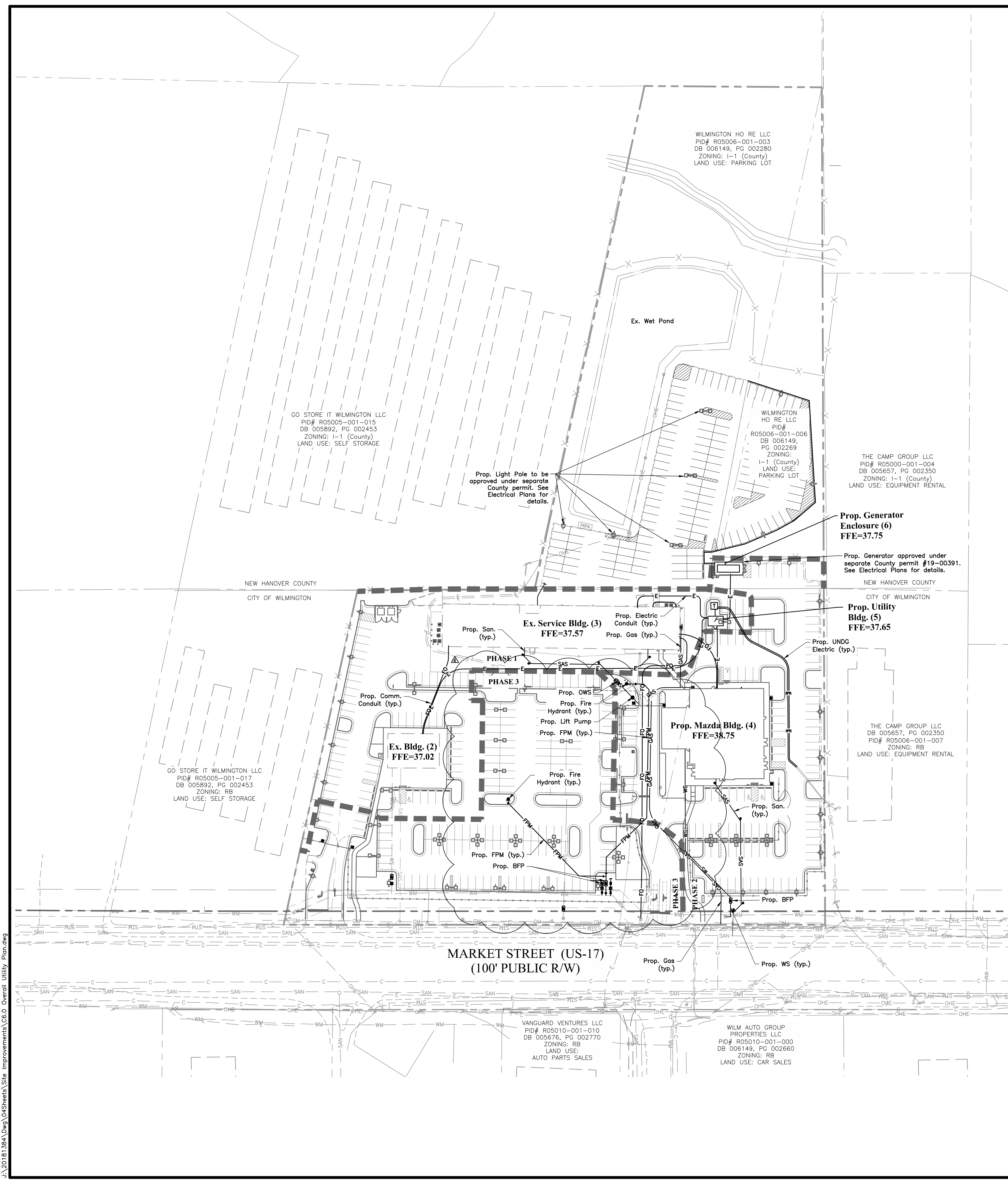
Planning \_\_\_\_\_

Traffic \_\_\_\_\_

Fire \_\_\_\_\_



DATE	April 17, 2019
SCALE	1" = 60'
JOB NO.	20181384
SHEET	C5.4



### LEGEND

EXISTING	
---	Site Boundary/R/W
---	Parcel Line
---	Water Course
---	Stream Buffers
---	Local Floodplain
---	Easement
---	Pavement
---	Curb
---	Fence
---	Storm Sewer
---	Sign
PROPOSED	
---	Building
---	Curb
---	Pavement
---	Fence
---	Easement
---	Sign
---	Bollard
---	Setback Line
---	Water Service Line
---	Fire Protection Line
---	Fire Hydrant
---	Water Meter
---	Water Valve
---	FDC Connection
---	Backflow Preventer
---	Gas Main
---	Gas Valve
---	Sanitary Service + MH
---	Oil/Water Separator
---	Overhead Electric Line
---	Underground Electric Line
---	Electric Transformer
---	Electric Vehicle Charger
---	Electric Switch
---	Air Conditioner
---	Electric Keypad
---	Electric Pullbox
---	Light
---	Communication Line
---	Splice Conduit
---	Gas Valve
---	Storm Line

- ### UTILITY SEQUENCING
- Contractor to install transformer pad and electric conduits to existing buildings. Steel plates may be needed to cover conduit trenches to maintain dealership operations and to allow Duke Energy to install new transformer and electric conduit. (See Sheet C6.1).
  - Contractor to install all underground communication conduits.
  - Contractor to ensure electric and communication feed to remain uninterrupted during demolition of existing building.
  - Contractor to install all remaining utilities shown on sheet C6.2.
  - Contractor to install all remaining utilities shown on sheet C6.3.

- ### PRIVATE UTILITY SERVICE LENGTHS
- SANITARY**
- 154.70 LF of Private 4" PVC Gravity Sanitary Sewer Service
  - 249.43 LF of Private 6" PVC Gravity Sanitary Sewer Service
- WATER**
- 11.97 LF of Private 1" PVC Irrigation Water Service
  - 221.78 LF of Private 1.5" PVC Domestic Water Service
  - 422.61 LF of Private 6" PVC Fire Water Service
  - 22.65 LF of Private 8" PVC Fire Water Service

### PHASING NOTE

Phase Line is approximate. Contractor to coordinate with owner for location of temporary fencing, gate locations, delivery access, etc. throughout construction. Modifications to the phase line can be incorporated by the contractor with approvals by the owner/owner's representative and local agencies (City of Wilmington, NCDOT, etc.) if required.

### IRRIGATION NOTE

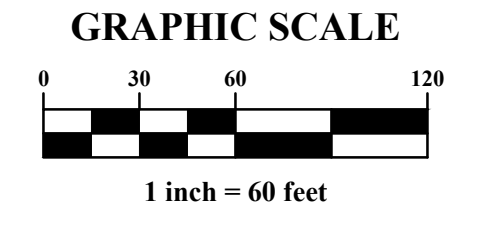
Contractors base bid shall include a design-build irrigation design which must be reviewed and approved by the owner or owner's representative. Base bid shall include the design, materials, and installation of the new irrigation system.

- ### CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARD NOTES
- All proposed additions to the Cape Fear Public Utility Authority (CFPUA) water distribution and sanitary sewer collection systems, as shown and specified herein, shall be designed and constructed to conform to state rules and the CFPUA's minimum technical standards. The CFPUA minimum technical standards are contained in the current Design Guidance Manual, Material Specification Manual, Technical Specifications for Construction, and Standard Drawing Details.
  - Sewer guards required at all manholes. Stainless steel sewer guards required at manholes located in traffic areas.
  - Water and sewer services shall be perpendicular to water and sewer services shall be perpendicular to main and terminate 18" inside right-of-way line. Sewer services in cut-de-socs are required to be perpendicular, or must originate in end of line manhole and terminate 18" inside right-of-way line.
  - All sewer services connecting into ductile iron mains all sewer services connecting into ductile iron mains shall also be constructed of DIP.
  - No flexible couplings shall be used.
  - All stainless steel fasteners shall be type 316. All stainless steel fasteners shall be type 316.
  - Cleanouts shall be located a minimum of 12 feet from all property corners.
  - Water meter boxes are to be a minimum of 5 feet from the property corner.
  - Unused services shall be abandoned. Abandoned water services shall be disconnected from main.
  - A minimum of 10' of main line shall be replaced for new connections to existing clay gravity sewer mains.

Note: See Sheets C2.0 for Overall Existing Conditions Legend.

- ### GENERAL UTILITY NOTES
- All disturbed areas to be seeded as soon as practically possible, but in no case shall the seeding take longer than 14 days after the construction activity has temporarily or permanently ceased.
  - All excavation for the utilities is unclassified. When excavating, remove all materials of whatever substance is encountered.
  - The Contractor shall carefully study and compare the construction documents and shall immediately report to the Engineer any discrepancies or omissions discovered on the plans or at the site. The Contractor shall take field measurements to verify that all locations are correct prior to commencing construction.
  - Contractor to provide the Engineer a set of marked up construction drawings indicating the as-built location of the sewer, storm and water systems. All features (i.e. bends, valves, manholes, etc.) shall be located to known objects in the field by 2 points).
  - All materials, construction, and plans are to comply with current City of Wilmington Standards, Cape Fear Public Utility Authority Standard Technical Specifications and Cape Fear Public Utility Authority Materials and Specifications Manual.
  - Contact 811 a minimum of 72 hours before digging.
  - Contractor shall verify location of all existing underground utilities and required relocations, prior to beginning work, both public and private. Contractor is fully responsible for all underground utilities and shall repair any damage as a result of this contract.
  - Contractor shall ensure utility removal, abandonment, or installation shall not disrupt normal operations. Contractor shall coordinate all utility work with utility providers.
  - All work to be accomplished in strict accordance with all Local Ordinances, City and State.
  - Backfill all excavations resulting from the Demolition Work to meet the requirements for fill determined by a site soils engineer.
  - No demolition prior to pre construction meeting. Demolition prior to pre construction meeting and grading permit will be subject to immediate civil penalties.
  - Proposed Signs, Lighting & Landscaping will be designed in accordance with the City of Wilmington Standards and Regulations.
  - See Sheets C5.0 - C5.2 for Storm Sewer Specifications.
  - Reference Electrical Plans for size and number of conduits.

J:\2018\138A\Draw\04\Sheets\Site Improvements\C6.0 Overall Utility Planning.dwg



**WILMINGTON**  
NORTH CAROLINA

Public Services • Engineering Division

**APPROVED STORMWATER MANAGEMENT PLAN**

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

Signature: \_\_\_\_\_

**Approved Construction Plan**

Name	Date
Planning	_____
Traffic	_____
Fire	_____



REVISIONS

MARK	DATE	DESCRIPTION
A	08/16/19	Revised per City of Wilmington, New Hanover County, and CFPUA comments
B	09/17/19	Revised per City of Wilmington review comments
C	11/23/19	Utility Building Addition
D	01/06/20	Removal of Building (1)

CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA

FOR

**MAZDA OF WILMINGTON**

**5813, 5821, & 5911 MARKET STREET**

**OVERALL UTILITY PLAN**

EMH T

EVANS, MECHWART, HAMBLETTON & TILTON, INC.  
Engineers • Planners • Scientists  
1000 S. College Ave., Suite 200  
Wilmington, NC 28403  
Phone: 910.340.2333 Fax: 910.340.2348  
emht.com

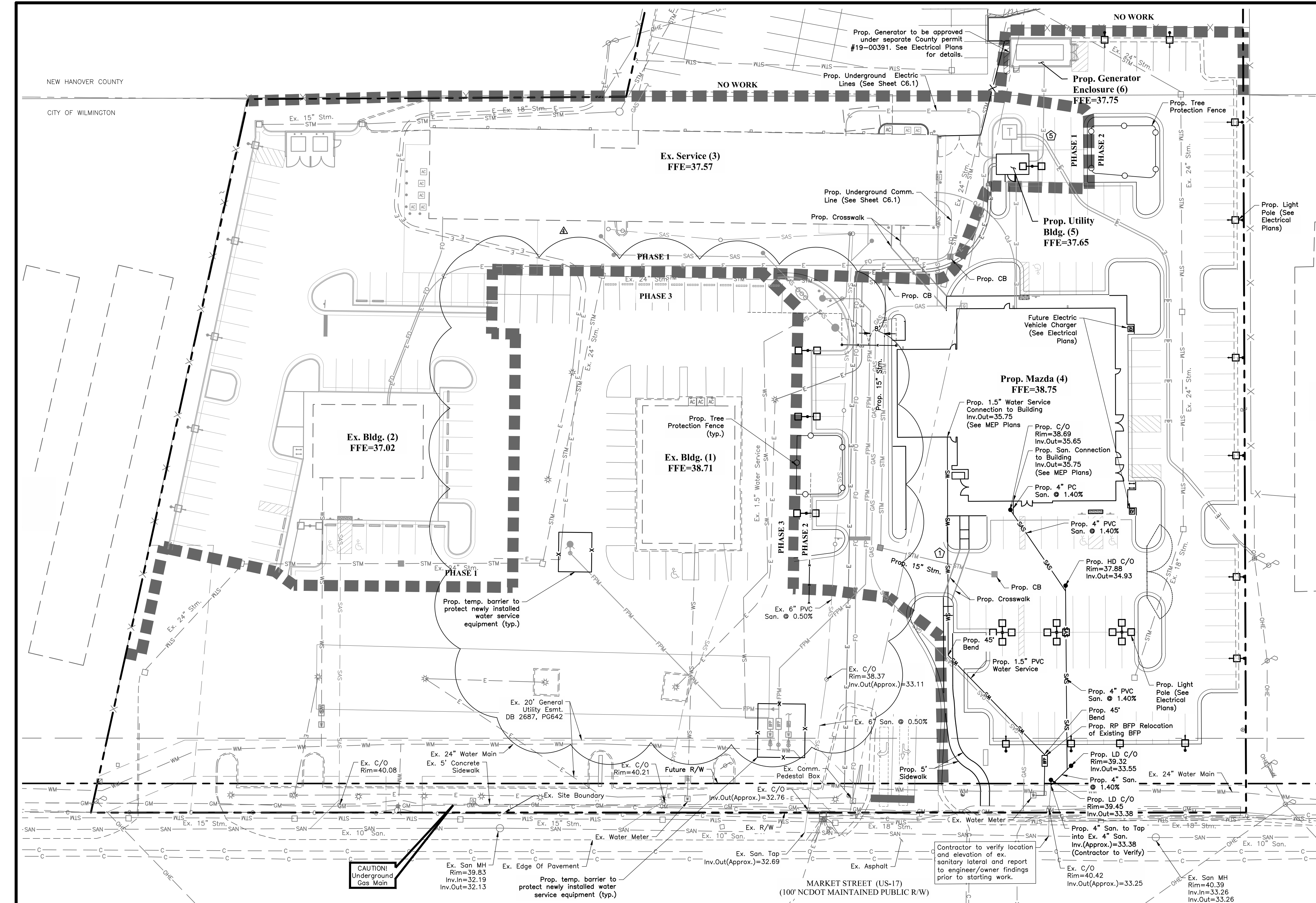
DATE: April 17, 2019

SCALE: 1" = 60'

JOB NO.: 20181384

SHEET: C6.0

J:\2018\138A\04\Sheets\Site Improvements\C6.2 Utility Plan Phase 2.dwg



**LEGEND**

EXISTING	
---	Site Boundary/R/W
---	Parcel Line
---	Water Course
---	Stream Buffers
---	Local Floodplain
---	Easement
---	Pavement
---	Curb
---	Fence
---	Storm Sewer
---	Sign
---	Prop. Generator Enclosure (6) FFE=37.75
---	Prop. Utility Bldg. (5) FFE=37.65
---	Prop. Mazda (4) FFE=38.75
---	Ex. Bldg. (1) FFE=38.71
---	Ex. Bldg. (2) FFE=37.02
---	Ex. Service (3) FFE=37.57

PROPOSED	
---	Building
---	Curb
---	Pavement
---	Fence
---	Easement
---	Sign
---	Bollard
---	Setback Line
---	Water Service Line
---	Fire Protection Line
---	Fire Hydrant
---	Water Meter
---	Water Valve
---	FDC Connection
---	Backflow Preventer
---	Gas Main
---	Gas Valve
---	Gas Meter
---	Sanitary Service + MH
---	Oil/Water Separator
---	Overhead Electric Line
---	Underground Electric Line
---	Electric Transformer
---	Electric Vehicle Charger
---	Electric Switch
---	Air Conditioner
---	Electric Keypad
---	Electric Pullbox
---	Light
---	Communication Line
---	Spare Conduit
---	Storm Line
---	Construction Phasing Limits

- UTILITY NOTES**
- Sanitary sewer and water line to be constructed to the City of Wilmington and Cape Fear Public Utility Authority standards and specifications.
  - Contractor to verify the exact depth and location of all existing utilities, prior to beginning excavation for existing utilities.
  - All water line shall be PVC unless otherwise noted on plans.
  - Contractor to provide a separation of at least 18 inches between the top of the sanitary piping and the bottom of the water line whenever possible. Whenever a water line crosses underneath a sanitary sewer both the water line and sanitary sewer shall be constructed of AWWA-approved ductile iron pipe.
  - All water services shall be constructed with a minimum cover of 36 inches.
  - Contractor to provide data to the City of Wilmington that shows fire flow at completion of construction.
  - Contractor to protect existing utilities throughout construction. See sheet C1.1 for additional utility protection notes.
  - Each Backflow Prevention Assembly is required to be tested by the City of Wilmington approved certified test prior to placing the water system in service.
  - Contractor to coordinate location of connection of proposed water main to building with architect.
  - There shall be no taps, piping branches, unapproved bypass piping, hydrants, Fire Dept. connection points, or other water-using apparatuses connected to the supply line between any water meter and its backflow preventer.
  - Tamper switches to be installed on gate valves of Backflow Prevention Assemblies on supply lines that serve fire sprinkler systems.
  - All existing c/o inverts to be verified by the contractor. Contractor shall notify the Engineer if there are any discrepancies between field verified inverts and inverts shown on plans.
  - Contractor to ensure Bollard Fencing Gap at sidewalks is less than 6'.
  - Reference Electrical Plans. Conduit to be run to provide possible power to gates in future.
  - Contractor to Coordinate Electric Line Removal with Utility Provider.
  - Contractor to Coordinate Removal of Existing Electric Pole and Associated Service to Adjacent site with Provider and Property owner to minimize outage impacts.
  - Electric Pole Removal Shall Include All Underground Facilities.
  - Structure Demolition Shall Also Include All Below Grade Structures and Foundations.
  - Contractor shall coordinate with Piedmont Natural Gas (DJ Medeiros (910)431-3233) for new service connection.
  - See sheets C2.0-C2.3 and C4.0-C4.3 for locations of mill and overlay and sawcuts for utility installation.

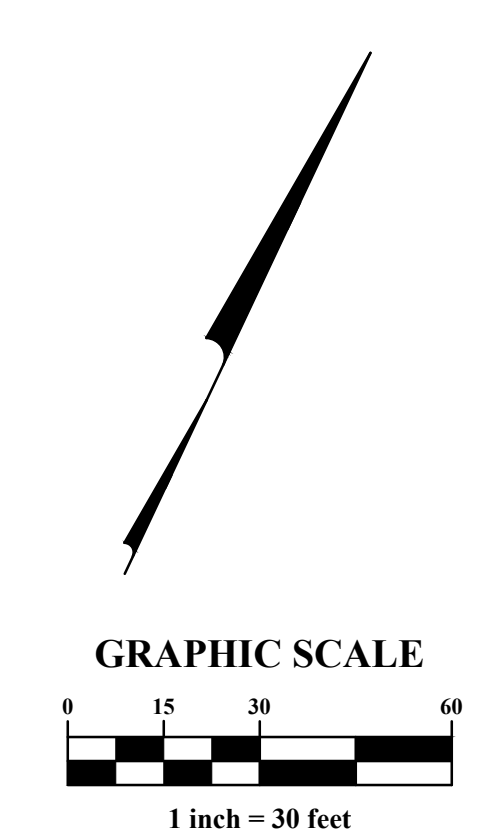
**PHASING NOTE**

Phase Line is approximate. Contractor to coordinate with owner for location of temporary fencing, gate locations, delivery access, etc. throughout construction. Modifications to the phase line can be incorporated by the contractor with approval by the owner/owner's representative and local agencies (City of Wilmington, NCDOT etc.) if required.

**UTILITY CROSSINGS**

Prop. 15" Stm. Top	=	33.84
Ex. Water Service Bottom	=	35.04
Separation	=	1.20

Communications and Underground Electric conduit to be installed above or below existing and/or proposed utilities as needed but must meet minimum 3' of cover or Duke Energy specifications.



**CITY OF WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division

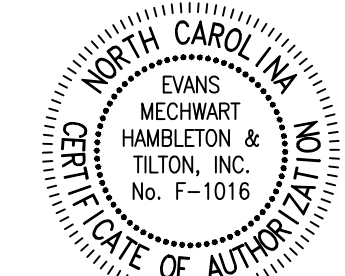
APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

Signed: \_\_\_\_\_

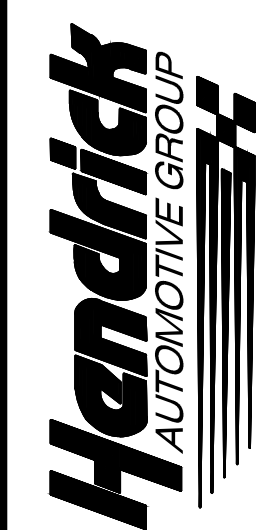
Approved Construction Plan

Name	Date
Planning	_____
Traffic	_____
Fire	_____

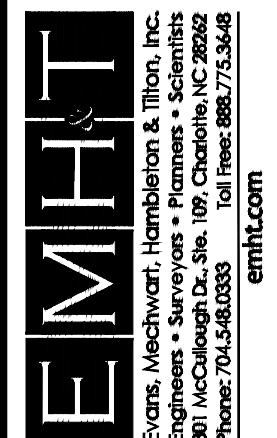


**REVISIONS**

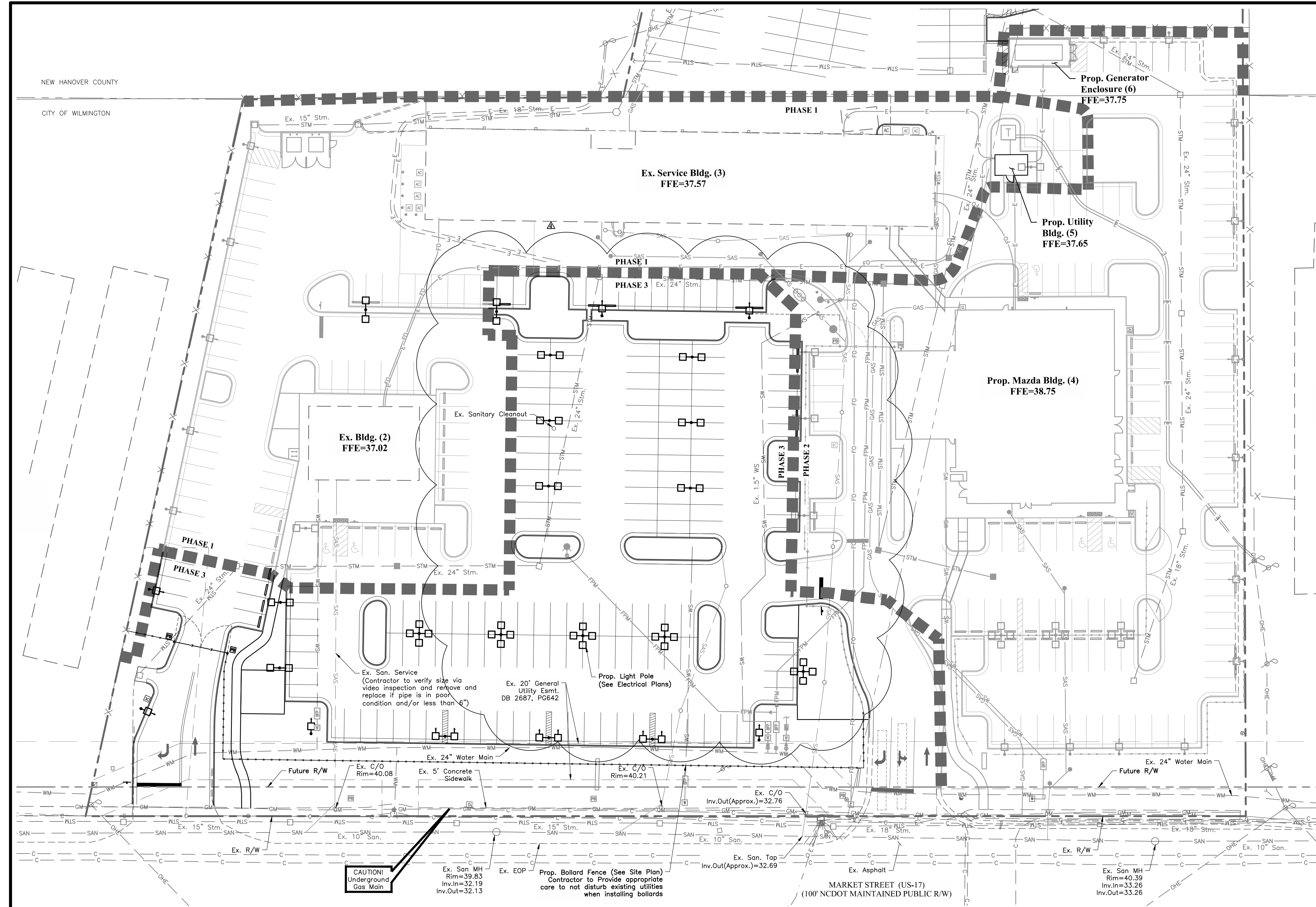
MARK	DATE	DESCRIPTION
A	08/16/19	Revised per City of Wilmington, New Hanover County, and CFPUA comments
B	09/17/19	Revised per City of Wilmington review comments
C	11/13/19	Utility Building Addition
D	10/20/20	Removal of Building (1)



CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA  
FOR  
SITE IMPROVEMENT PLAN  
**MAZDA OF WILMINGTON**  
5813, 5821, & 5911 MARKET STREET  
UTILITY PLAN PHASE 2



DATE	April 17, 2019
SCALE	1" = 30'
JOB NO.	20181384
SHEET	C6.3



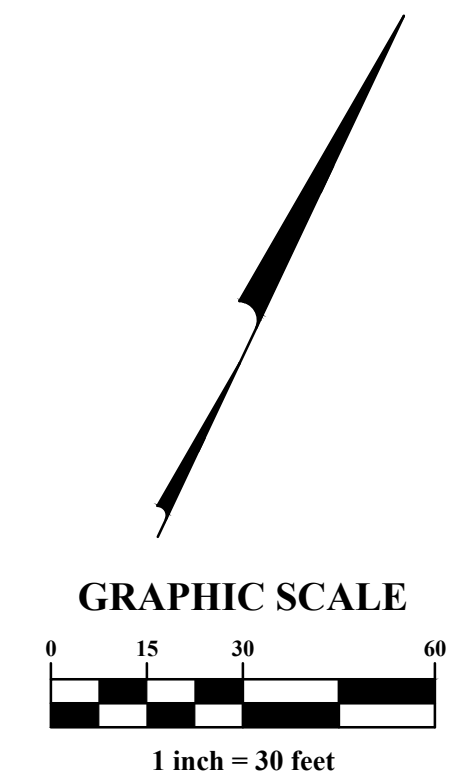
LEGEND	
<b>EXISTING</b>	
	Site Boundary/R/W
	Parcel Line
	Water Course
	Stream Buffers
	Local Floodplain
	Easement
	Pavement
	Curb
	Fence
	Storm Sewer
	Sign
<b>PROPOSED</b>	
	Building
	Curb
	Pavement
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	Bollard
	Setback Line
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	Air Conditioner
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	Communication Line
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	Storm Line

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  - Contractor to protect existing utilities throughout construction. See sheet C1.1 for additional utility protection notes.
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**PHASING NOTE**

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**WILMINGTON NORTH CAROLINA**  
Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

Signed: \_\_\_\_\_

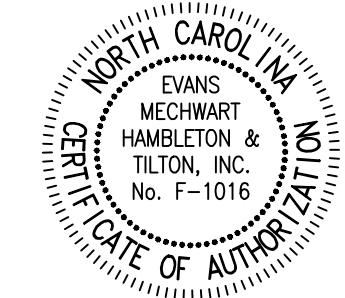
Approved Construction Plan

Name \_\_\_\_\_ Date \_\_\_\_\_

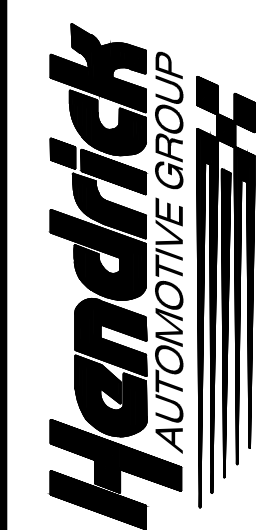
Planning \_\_\_\_\_

Traffic \_\_\_\_\_

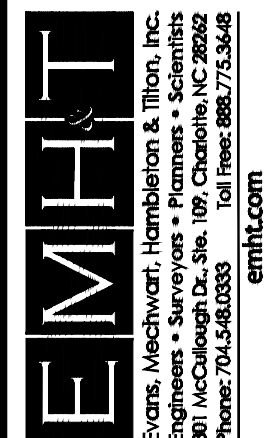
Fire \_\_\_\_\_



MARK	DATE	DESCRIPTION
1	08/16/19	Revised per City of Wilmington, New Hanover County, and CFPUA comments
2	09/17/19	Revised per City of Wilmington review comments
3	11/21/19	Utility Building Addition
4	01/20/20	Removal of Building (1)

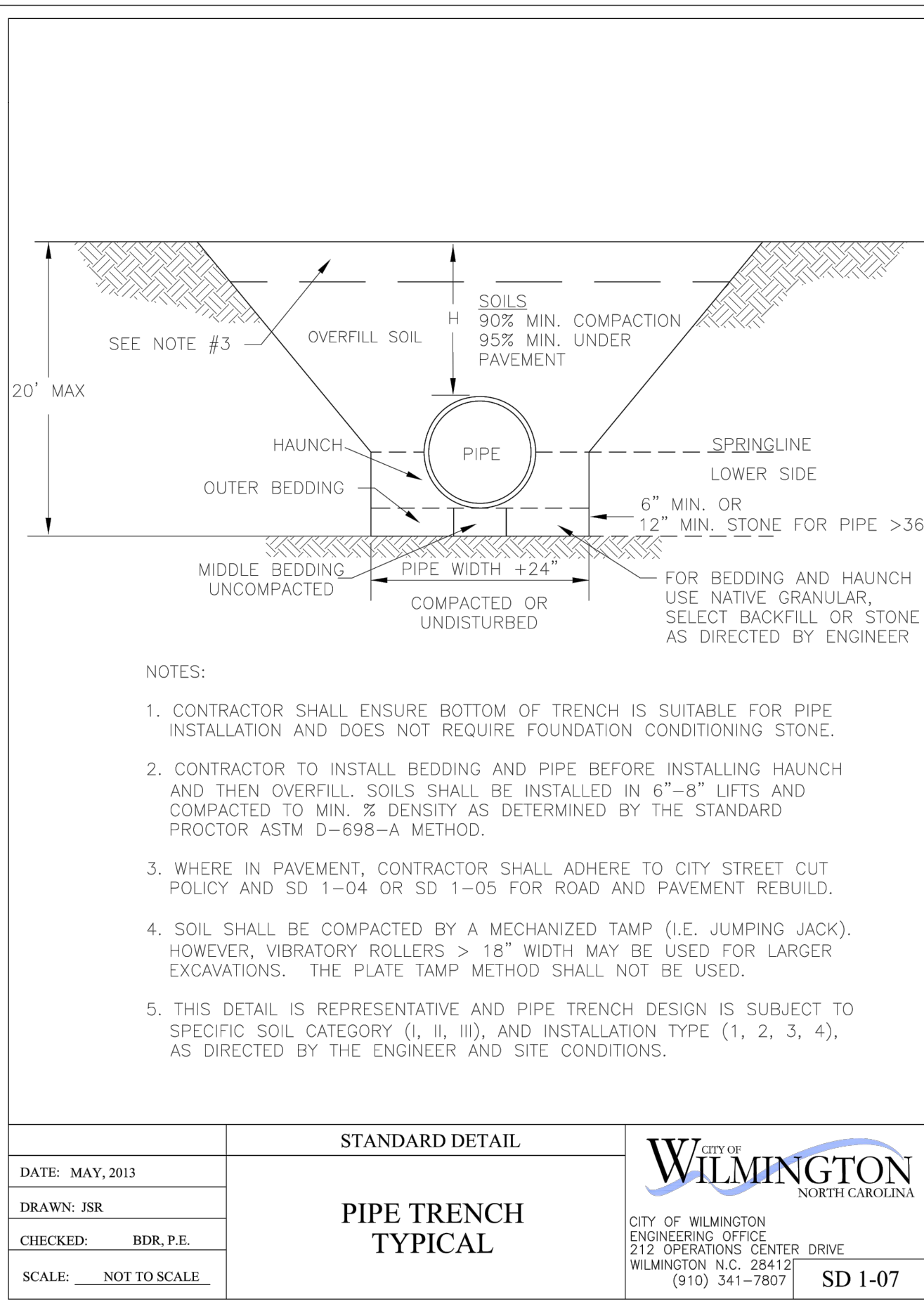


CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA  
FOR  
SITE IMPROVEMENT PLAN  
**MAZDA OF WILMINGTON**  
**5813, 5821, & 5911 MARKET STREET**  
UTILITY PLAN PHASE 3



DATE	April 17, 2019
SCALE	1" = 30'
JOB NO.	20181384
SHEET	C6.4





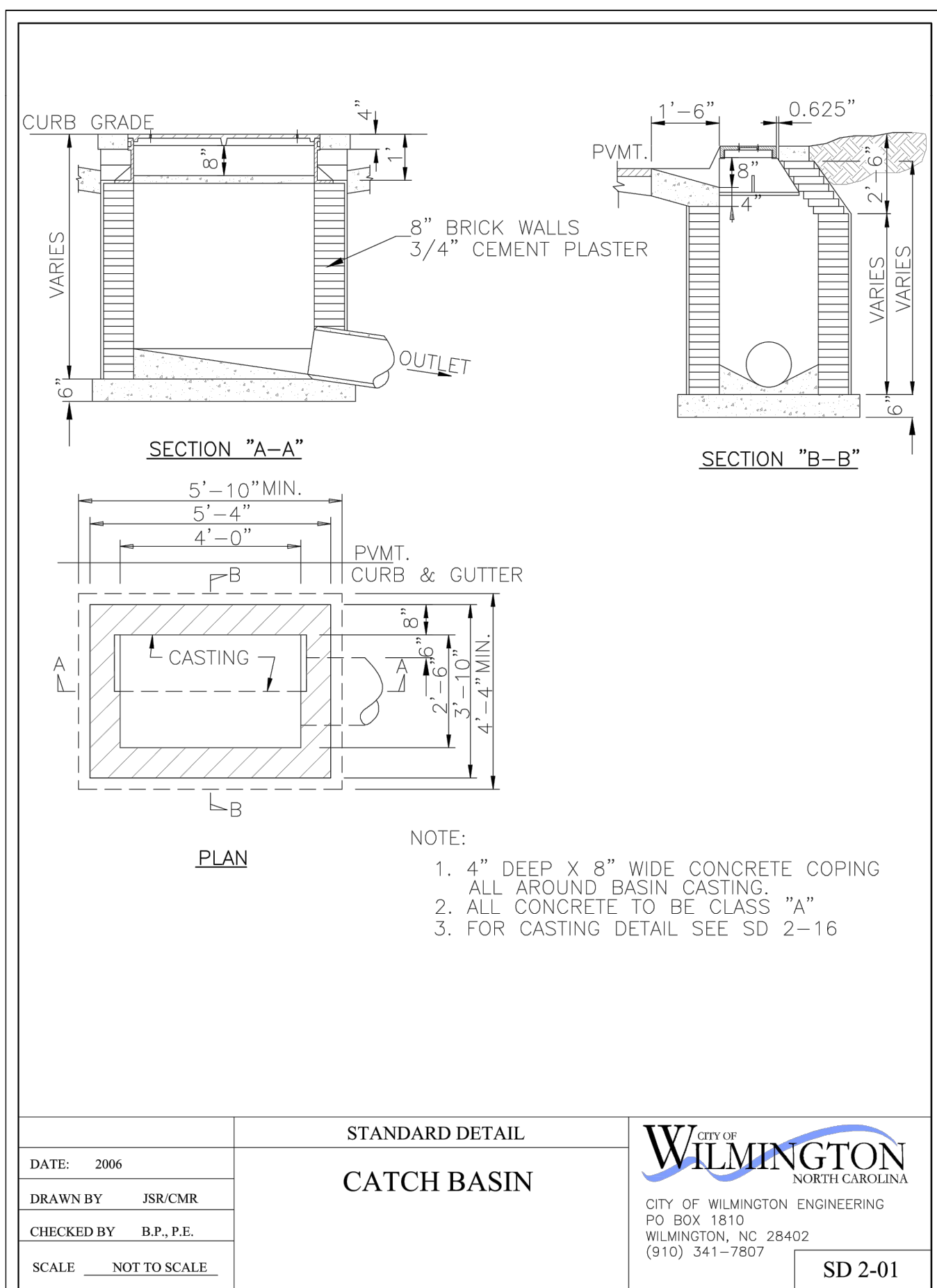
- NOTES:
- CONTRACTOR SHALL ENSURE BOTTOM OF TRENCH IS SUITABLE FOR PIPE INSTALLATION AND DOES NOT REQUIRE FOUNDATION CONDITIONING STONE.
  - CONTRACTOR TO INSTALL BEDDING AND PIPE BEFORE INSTALLING HAUNCH AND THEN OVERFILL. SOILS SHALL BE INSTALLED IN 6"-8" LIFTS AND COMPACTED TO MIN. % DENSITY AS DETERMINED BY THE STANDARD PROCTOR ASTM D-698-A METHOD.
  - WHERE IN PAVEMENT, CONTRACTOR SHALL ADHERE TO CITY STREET CUT POLICY AND SD 1-04 OR SD 1-05 FOR ROAD AND PAVEMENT REBUILD.
  - SOIL SHALL BE COMPACTED BY A MECHANIZED TAMP (I.E. JUMPING JACK). HOWEVER, VIBRATORY ROLLERS > 18" WIDTH MAY BE USED FOR LARGER EXCAVATIONS. THE PLATE TAMP METHOD SHALL NOT BE USED.
  - THIS DETAIL IS REPRESENTATIVE AND PIPE TRENCH DESIGN IS SUBJECT TO SPECIFIC SOIL CATEGORY (I, II, III), AND INSTALLATION TYPE (1, 2, 3, 4), AS DIRECTED BY THE ENGINEER AND SITE CONDITIONS.

DATE: MAY, 2013  
 DRAWN BY: JSR  
 CHECKED BY: BDR, P.E.  
 SCALE: NOT TO SCALE

STANDARD DETAIL  
**PIPE TRENCH TYPICAL**

CITY OF WILMINGTON  
 NORTH CAROLINA  
 CITY OF WILMINGTON ENGINEERING OFFICE  
 212 OPERATIONS CENTER DRIVE  
 WILMINGTON, N.C. 28412  
 (910) 341-7807

SD 1-07



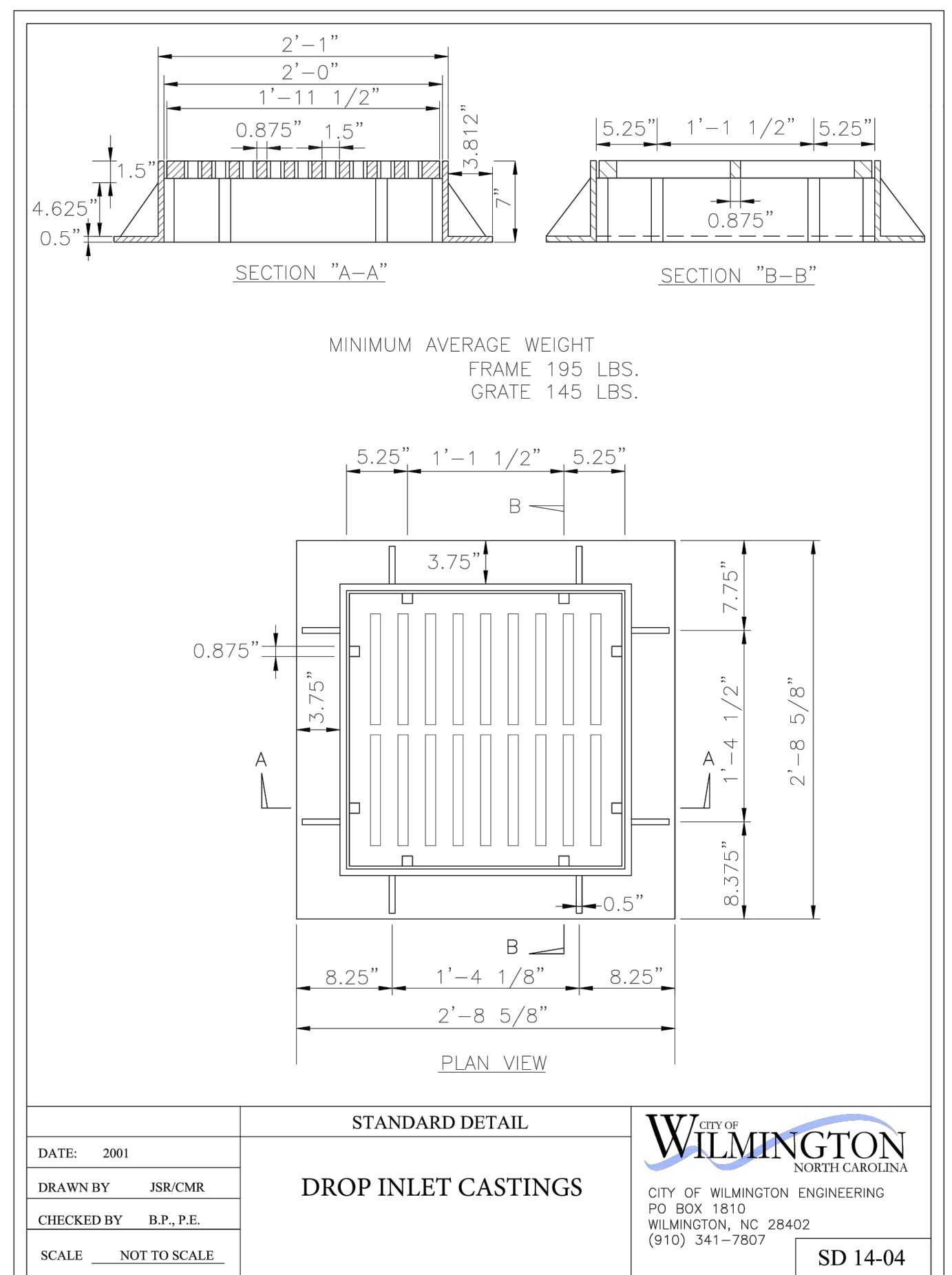
- NOTE:
- 1/4" DEEP X 8" WIDE CONCRETE COPING ALL AROUND BASIN CASTING.
  - ALL CONCRETE TO BE CLASS "A"
  - FOR CASTING DETAIL SEE SD 2-16

DATE: 2006  
 DRAWN BY: JSR/CMR  
 CHECKED BY: B.P., P.E.  
 SCALE: NOT TO SCALE

STANDARD DETAIL  
**CATCH BASIN**

CITY OF WILMINGTON  
 NORTH CAROLINA  
 CITY OF WILMINGTON ENGINEERING  
 PO BOX 1810  
 WILMINGTON, NC 28402  
 (910) 341-7807

SD 2-01

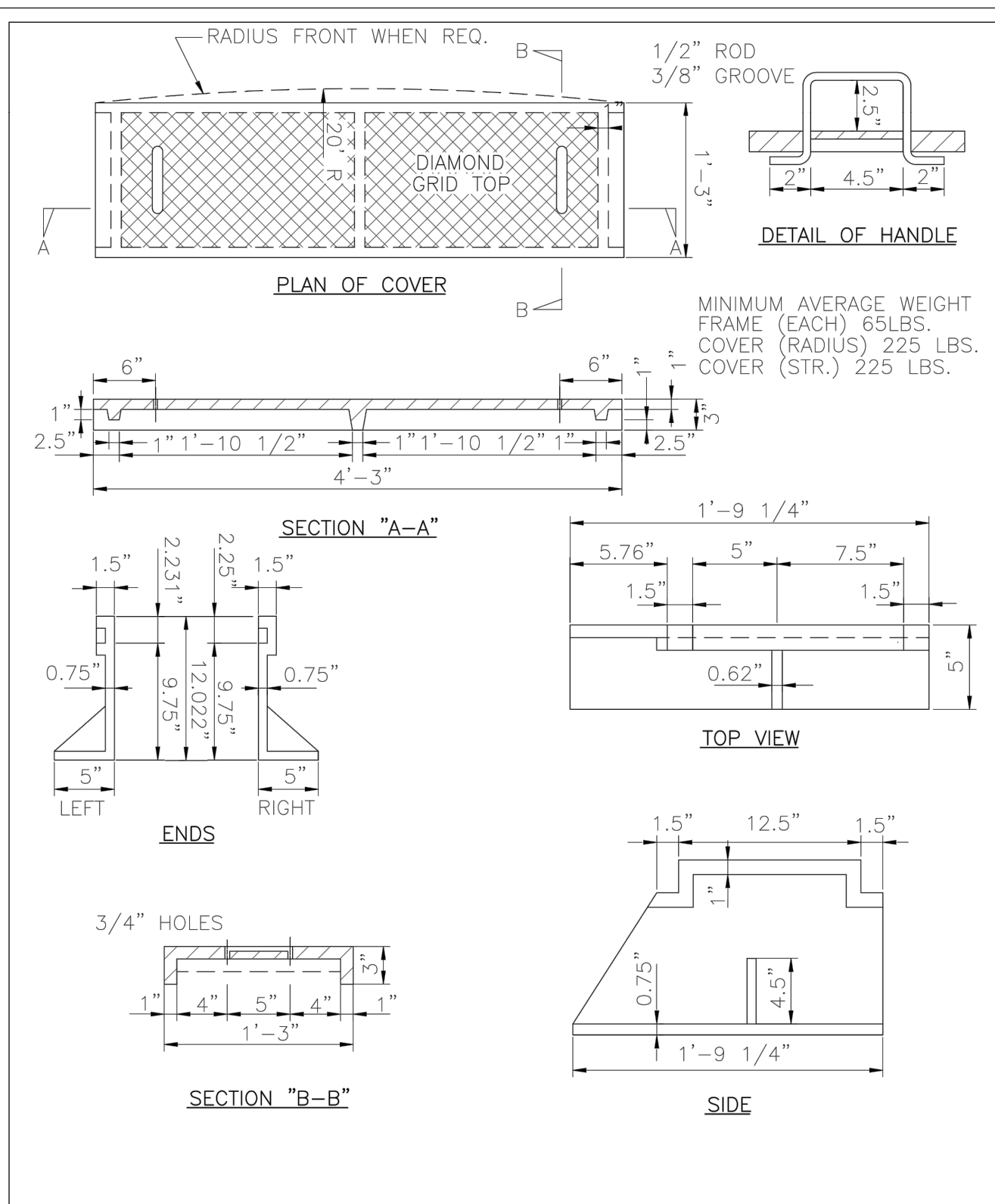
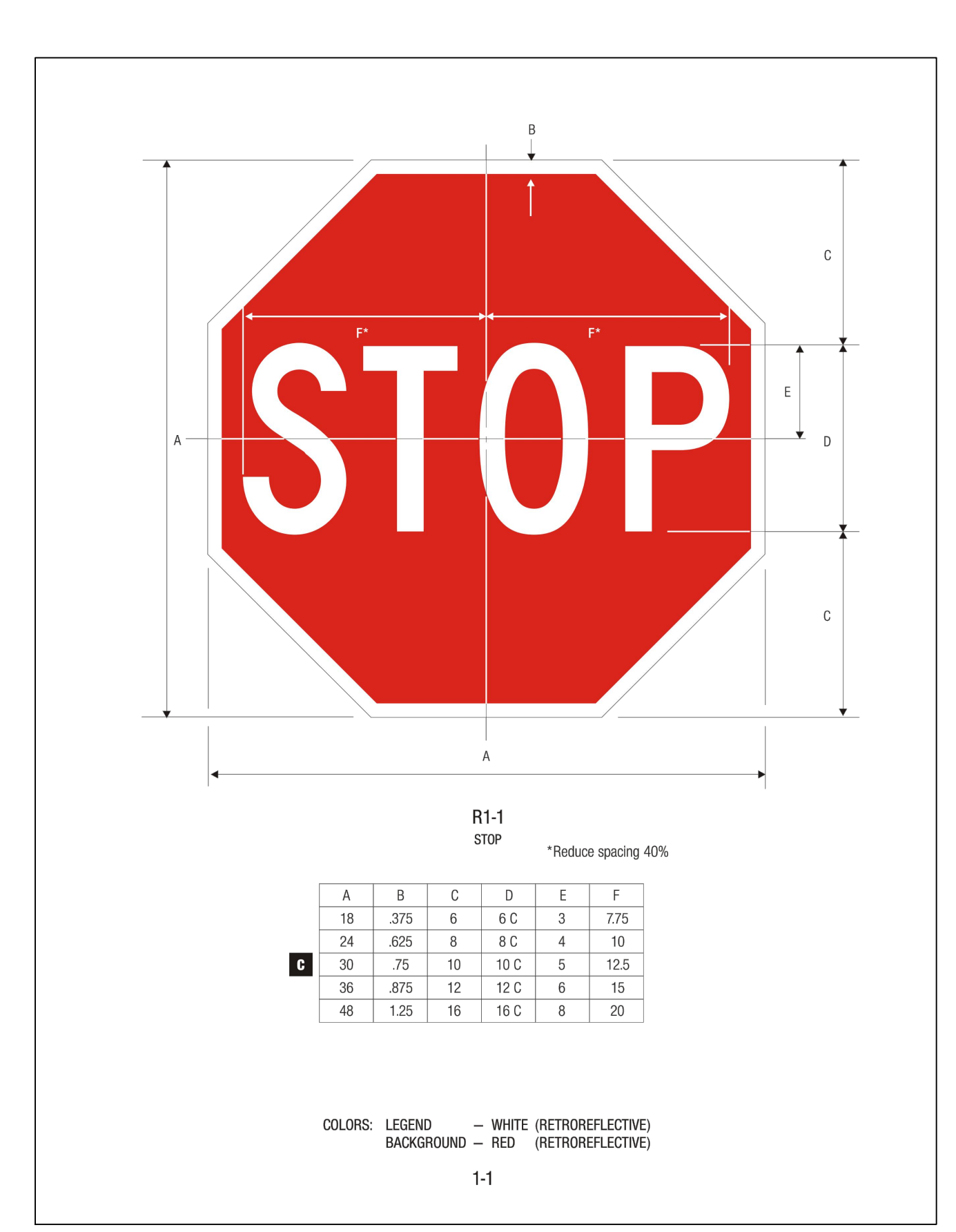


DATE: 2001  
 DRAWN BY: JSR/CMR  
 CHECKED BY: B.P., P.E.  
 SCALE: NOT TO SCALE

STANDARD DETAIL  
**DROP INLET CASTINGS**

CITY OF WILMINGTON  
 NORTH CAROLINA  
 CITY OF WILMINGTON ENGINEERING  
 PO BOX 1810  
 WILMINGTON, NC 28402  
 (910) 341-7807

SD 14-04

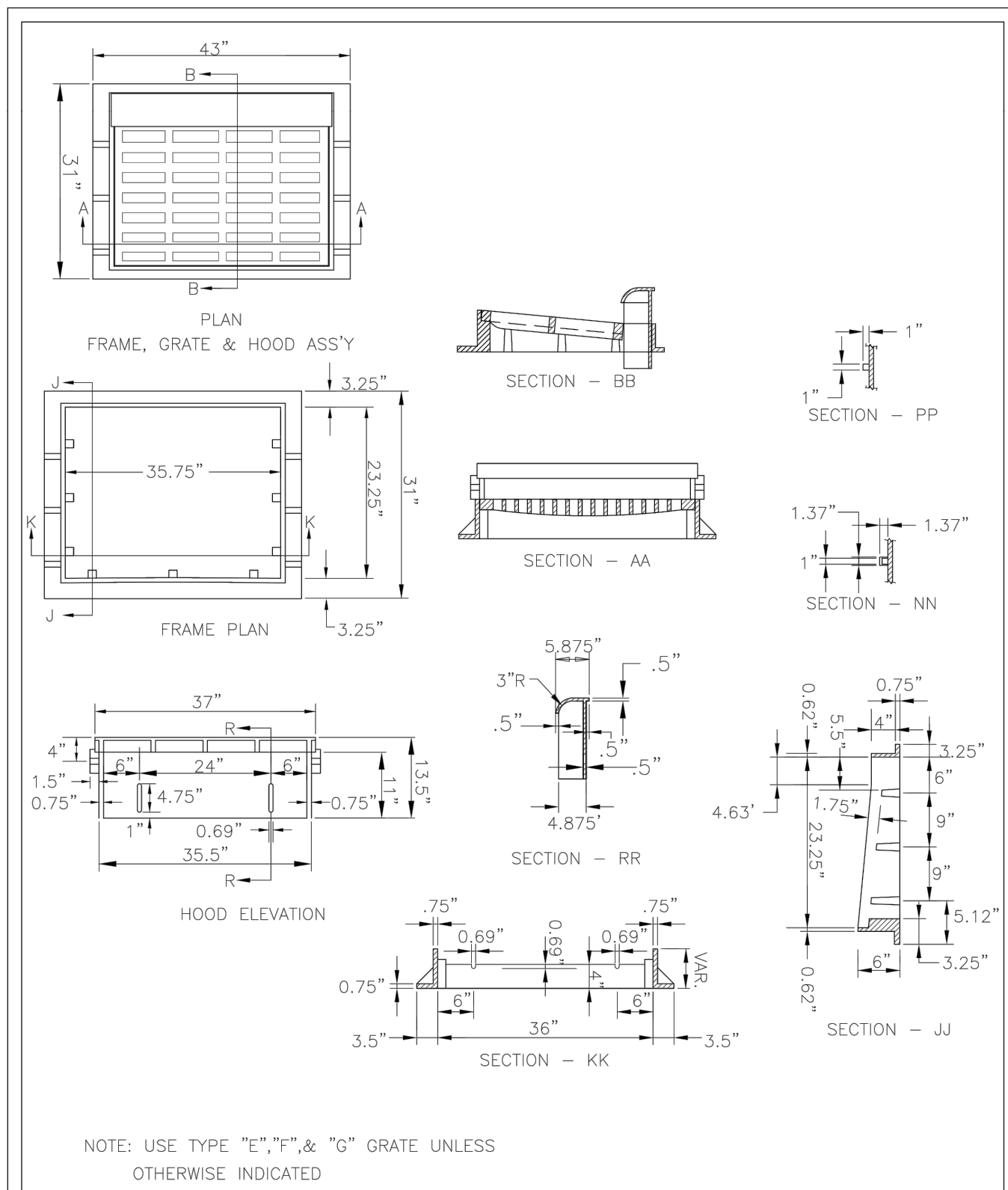


DATE: 2001  
 DRAWN BY: JSR/CMR  
 CHECKED BY: B.P., P.E.  
 SCALE: NOT TO SCALE

STANDARD DETAIL  
**CATCH BASIN CASTINGS DETAIL**

CITY OF WILMINGTON  
 NORTH CAROLINA  
 CITY OF WILMINGTON ENGINEERING  
 PO BOX 1810  
 WILMINGTON, NC 28402  
 (910) 341-7807

SD 2-16



DATE: 2001  
 DRAWN BY: JSR/CMR  
 CHECKED BY: B.P., P.E.  
 SCALE: NOT TO SCALE

STANDARD DETAIL  
**CATCH BASIN CASTING FOR 24\"/>**

CITY OF WILMINGTON  
 NORTH CAROLINA  
 CITY OF WILMINGTON ENGINEERING  
 PO BOX 1810  
 WILMINGTON, NC 28402  
 (910) 341-7807

SD 2-21

CITY OF WILMINGTON  
 NORTH CAROLINA  
 Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

Signed: \_\_\_\_\_

Approved Construction Plan  
 Name \_\_\_\_\_ Date \_\_\_\_\_

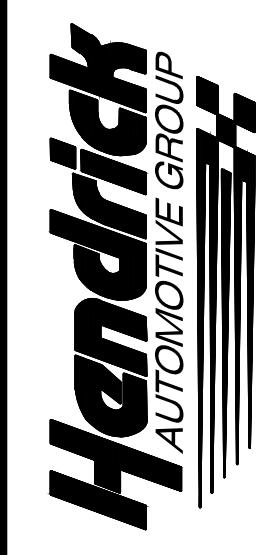
Planning \_\_\_\_\_  
 Traffic \_\_\_\_\_  
 Fire \_\_\_\_\_



The referenced details are City of Wilmington standard details.  
 They are not the responsibility or design of the Engineer.

REVISIONS

MARK	DATE	DESCRIPTION
A	08/16/10	Revised per City of Wilmington, New Hanover County, and CPWA comments
B	09/17/10	Revised per City of Wilmington review comments
C	11/13/10	Utility Building Addition
D	06/02/11	Removal of Building (1)

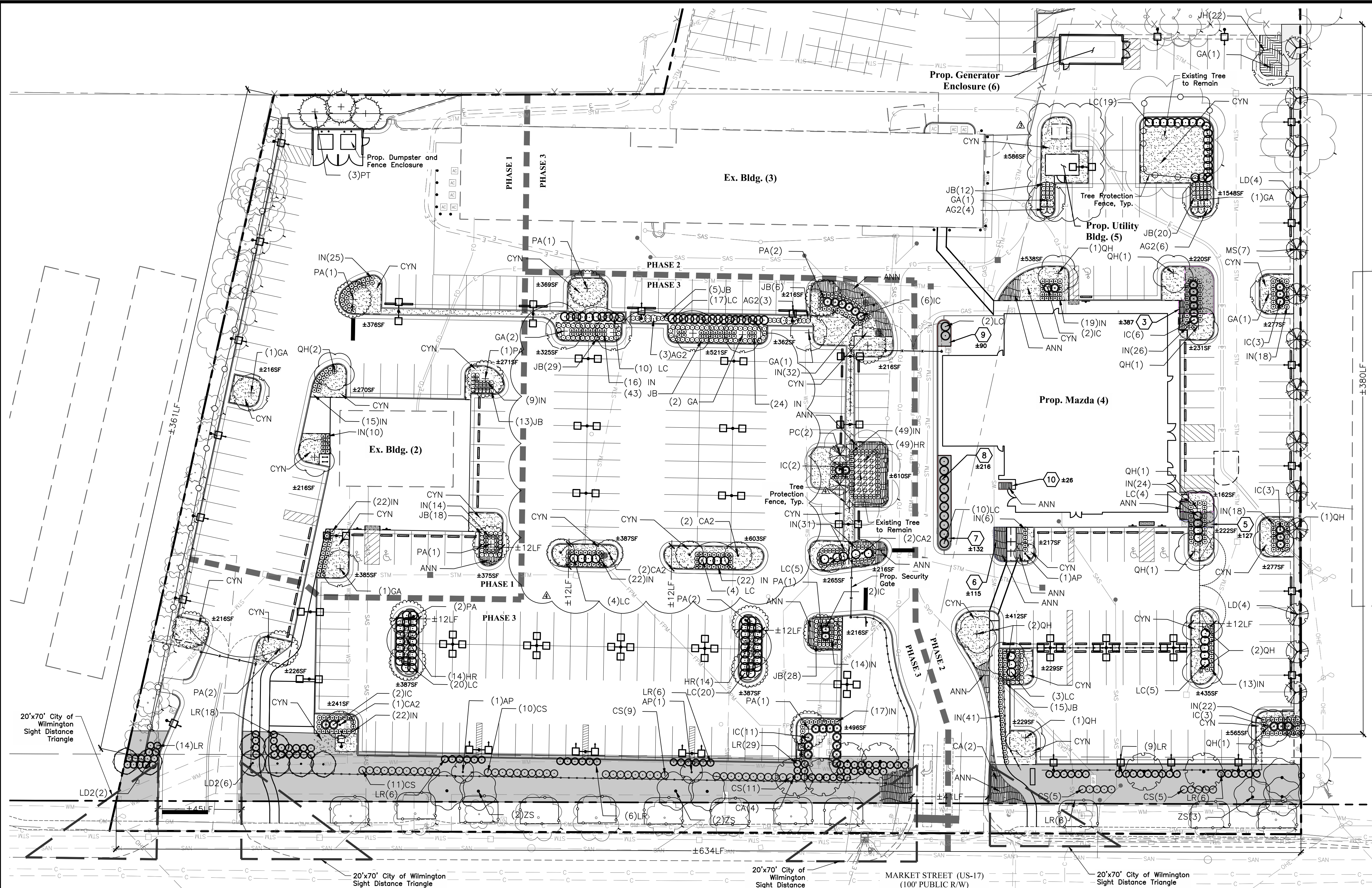


CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA  
 SITE IMPROVEMENT PLAN  
 FOR  
**MAZDA OF WILMINGTON**  
**5813, 5821, & 5911 MARKET STREET**  
 SITE DETAILS

**EMH&T**  
 Evans Mechwart Hamilton & Tilton, Inc.  
 Engineers • Surveyors • Planners • Scientists  
 1000 S. Salisbury Blvd., Suite 200  
 Wilmington, NC 28403  
 Phone: 910.348.0333  
 Fax: 910.348.0333  
 emht.com

DATE	April 17, 2019
SCALE	As Noted
JOB NO.	20181384
SHEET	C7.2

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**TREE MITIGATION CALCULATIONS**

Sec. 18-460 - Mitigation.  
 (b) 0 Significant Trees removed.  
 (c) 1 Regulated Tree for a total of ±12 calculated DBH removed.  
 ±12 / 3 = 4 replacement trees calculated. See below for exemption from mitigation.

Sec. 18-461 - Exemptions to Mitigation.  
 (b) 376 Regulated Trees exempted from mitigation. Replacement trees not provided.

**Landscape Calculations**

Sec. 18-448 - General standards for landscaping.  
 (d) 15 Trees per disturbed acre.  
 Total Disturbed Area: ±3.19 Ac  
 Total Trees required: 48 (15x3.19)  
 Total Trees provided: 50 Existing + 85 Proposed

**18-477 Street Yard Calculations**

MARKET STREET FRONTAGE (634 L.F. (-86 for Drives) = 548 L.F.)  
 RB Zoning Multiplier: 25  
 Square Footage Required: 25x548=13,700 S.F.  
 Square Footage Provided: ±13,760 S.F.

Trees Required: 25 (1 per 600 S.F.)  
 Trees Provided: 21 + 14 existing trees  
 Shrubs Required: 150 (6 per 600 S.F.)  
 Shrubs Provided: 151

**Sec. 18-481 - Parking Lot Landscaping**  
 All parking islands shall be planted per 18-481(a)  
 (g)(j) Tree Canopy Cover

127,253 S.F. Parking Lot Area @ 20%  
 At least 75% of trees to be Large Canopy Trees  
 Required = 25,451 S.F. Tree Canopy  
 Provided = 25,452 S.F. Provided

37 Canopy Trees @ 707 S.F. = 25,452 S.F. (85%)  
 14 Small Canopy Trees @ 314 S.F. = 4,396 S.F. (15%)

**Sec. 18-482 Perimeter landscaping**  
 (a.) Required One Tree per 18-27 feet

East Side: 380 L.F. = 15 trees minimum required  
 = 14 trees + 1 existing trees provided  
 West Side: 361 L.F. = 14 trees minimum required  
 = 26 Existing trees provided

**Sec. 18-490 - Foundation plantings**

(a.) Requirements based on 12% S.F. of Building Face.  
 (b.1) Portions of building with drive up services are exempt.  
 Not required for existing buildings.

**New Building**

North Facade - Not Required  
 East Facade (±2764 Facade S.F.):  
 332 S.F. required  
 3 = 387 S.F.  
 4 = Not Used  
 387 S.F. provided  
 South Facade (±2784 Facade S.F.):  
 332 S.F. required  
 5 = 127 S.F.  
 6 = 115 S.F.  
 7 = 132 S.F.  
 374 S.F. provided  
 West Facade (±2764 Facade S.F.):  
 332 S.F. required  
 8 = 216 S.F.  
 9 = 90 S.F.  
 10 = 26 S.F.  
 332 S.F. provided

**Sec. 18-504 - Screening for dumpsters and outside storage areas.**  
 Dumpster screened per Sec. 18-504.

**PLANT SCHEDULE**

QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION
<b>PARKING LOT TREES</b>				
11	Ginkgo biloba 'Autumn Gold'	Autumn Gold Ginkgo	2" Cal.	B&B
14	Platanus x acerifolia	London Plane Tree	2" Cal.	B&B
14	Quercus phellos 'Hightower'	Willow Oak	2" Cal.	B&B
<b>PARKING LOT UNDERSTORY TREES</b>				
3	Acer palmatum	Japanese Maple	8'-10' Ht.	B&B
7	Carpinus caroliniana	American Hornbeam	2" Cal.	B&B
2	Prunus x 'Okame'	Okame Cherry	8'-10' Ht.	B&B
<b>PERIMETER TREES</b>				
8	Lagerstroemia indica 'Dallas Red'	Red Crape Myrtle	2" Cal.	B&B
7	Magnolia virginiana	Sweet Bay Magnolia	2" Cal.	B&B
3	Pinus taeda	Loblolly Pine	8'-10' Ht.	B&B
<b>STREET YARD TREES</b>				
6	Carpinus caroliniana	American Hornbeam	2" Cal.	B&B
8	Lagerstroemia indica 'Dallas Red'	Red Crape Myrtle	2" Cal.	B&B
7	Zelkova serrata	Sawleaf Zelkova	2" Cal.	B&B
<b>INTERIOR LOT SHRUBS</b>				
16	Abelia x grandiflora	Glossy Abelia	12" Ht.	Cont.
40	Ilex cornuta 'Burfordii'	Burford Chinese Holly	36" Ht.	B&B
531	Ilex vomitoria 'Nana'	Dwarf Yaupon	12" Ht.	Cont.
189	Juniperus conferta 'Blue Pacific'	Blue Pacific Juniper	#1	Cont.
123	Loropetalum chinense 'Ever Red'	Ever Red Fringe Flower	12" Ht.	#3 Cont.
<b>STREET YARD SHRUBS</b>				
51	Cleyera japonica	Sakaki	36" Ht.	Cont.
100	Ligustrum japonicum 'Recurvifolium'	Curly Leaf Japanese Privet	36" Ht.	B&B
<b>ANNUAL GROUND COVER</b>				
ANN	Annuals	Annuals	Annual	
<b>GROUND COVER</b>				
CYN	Cynodon dactylon	Common Bermuda	Sod	
<b>PERENNIAL GROUND COVER</b>				
77	Hemerocallis x 'Rocket City'	Rocket City Daylily	#1	Cont.
22	Juniperus horizontalis 'Blue Rug'	Blue Rug Juniper	#1	Cont.

**LEGEND**

- 10' Perimeter Yard
- Street Yard
- Calculated Tree Island Area ±216
- Landscape Area for designated Foundation Plantings ±278
- Phasing Line

**Tree Protection Notes**

- Prior to any clearing, grading or construction activity, tree protection fencing shall be installed around protected trees or groves of trees. No construction workers, tools, materials, or vehicles are permitted within the tree protection fencing.
- Any trees and/or areas designated to be protected must be properly barricaded with fencing and protected throughout construction to insure that no clearing, grading or staging of materials will occur in those areas.
- No equipment is allowed on site until all tree protection fencing and silt fencing is installed and approved. Protective fencing is to be maintained throughout the duration of the project, and contractors shall receive adequate instruction on tree protection methods.

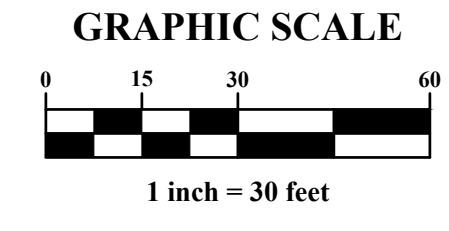
**Irrigation Note**

NOTE TO CONTRACTOR  
 Contractor to coordinate sleeves/irrigation with owner. Bid price shall include all irrigation sleeves and and add alternate for irrigation system.

**STREET TREE NOTE**  
 A landscaping plan indicating the location of required street trees shall be submitted to the City of Wilmington Traffic Engineering Division and Parks and Recreation Department for review and approval prior to the recording of the final plan.

**IRRIGATION NOTE**  
 Contractors base bid shall include a design-build irrigation design which must be reviewed and approved by the owner or owner's representative. Base bid shall include the design, materials, and installation of the new irrigation system.

**PHASING NOTE**  
 Phase Line is approximate. Contractor to coordinate with owner for location of temporary fencing, gate locations, delivery access, etc. throughout construction. Modifications to the phase line can be incorporated by the contractor with approval by the owner/owner's representative and local agencies (City of Wilmington, NCDOT etc.) if required.



**REVISIONS**

MARK	DATE	DESCRIPTION
A	08/03/17	Revised per City of Wilmington, New Hanover County, and CPWA comments
B	09/17/17	Revised per City of Wilmington review comments
C	10/11/17	Revised per City of Wilmington review comments
D	04/20/18	Revised per City of Wilmington review comments



CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA  
 FOR  
**MAZDA OF WILMINGTON**  
 NORTH CAROLINA  
**5813, 5821, & 5911 MARKET STREET**  
 LANDSCAPING PLAN

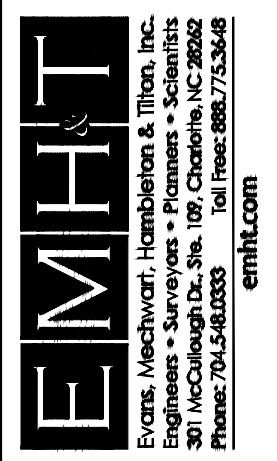
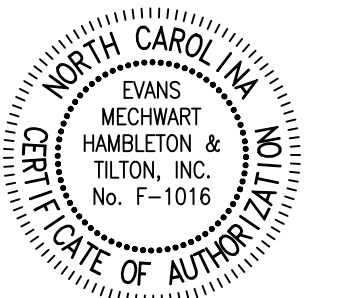
**APPROVED STORMWATER MANAGEMENT PLAN**

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

Signed: \_\_\_\_\_

**Approved Construction Plan**

Name	Date
Planning	_____
Traffic	_____
Fire	_____



DATE	April 17, 2019
SCALE	1" = 30'
JOB NO.	20181384
SHEET	L2.0

F:\20181384\Drawings\Site Improvements\L2.0 Landscaping Plan.dwg