



The Office of Highway Development  
Plats and Surveys Division

## **Plat Manual – 2022**

Consultant Version

# Office of Highway Development

## Plats and Surveys Division

### Plat Manual

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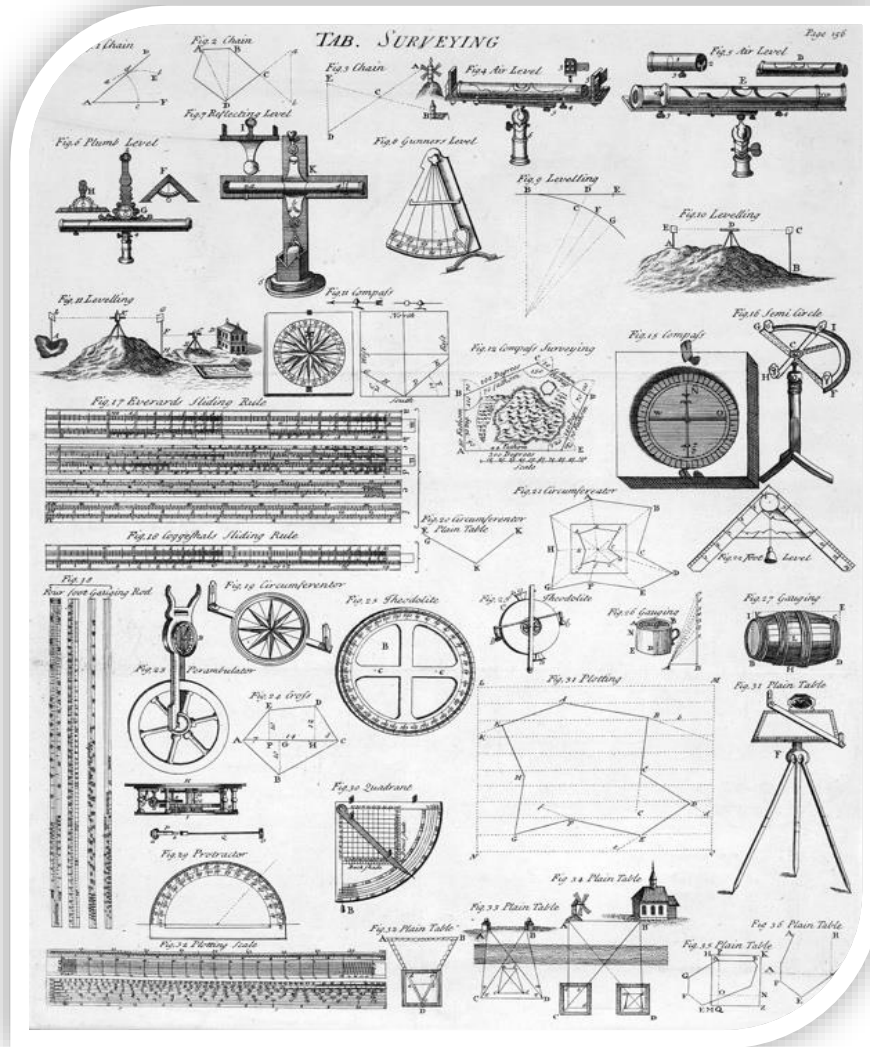


## MDOT Commonly Used Acronyms

CAD or CADD – Computer Aided Design and Drafting  
COMAR – Code of Maryland Regulations  
DELM – Declaration of Extra Land Memo  
DLLR – Department of Labor, Licensing and Regulation  
DNR – Department of Natural Resources  
ERD – Engineering Resource Division (MDOT SHA OHD)  
GIS – Geographic Information System  
GPS – Global Positioning System  
HDD – Highway Design Division (MDOT SHA OHD)  
HHD – Highway Hydraulics Division (MDOT SHA OHD)  
ICD – Innovative Contracting Division (MDOT SHA OHD)  
MDOT SHA – Maryland Department of Transportation State Highway Administration  
MOU – Memorandum of Understanding  
NTP – Notice to Proceed  
OBD – Office of Bridge Development (MDOT SHA)  
OED – Office of Environmental Design (MDOT SHA)  
OHD – Office of Highway Development (MDOT SHA)  
OOS – Office of Structures (MDOT SHA)  
OOTS – Office of Traffic and Safety (MDOT SHA)  
OPPE – Office of Planning & Preliminary Engineering (MDOT SHA)  
ORE – Office of Real Estate (MDOT SHA)  
PLS – Professional Land Surveyor/Property Line Surveyor  
PRD – Project Review Division (MDOT SHA OHD)  
PSD – Plats and Surveys Division (MDOT SHA OHD)  
R/W – Right of way  
SRC – State Roads Commission  
SUE – Subsurface Utility Engineering  
TE – Transportation Engineer or Temporary Employee  
TMDL – Total Maximum Daily Load  
TSO – The Secretary's Office (MDOT)  
USGS – United States Geological Survey

## Preface

The purpose of this manual is to provide all Maryland Department of Transportation State Highway Administration (MDOT SHA) employees, consultants, and other personnel working for the State of Maryland with guidelines, policies, and procedures established by the Plats and Surveys Division (PSD) to perform Plats-related work for the state assuming no prior PSD or surveying experience.



PSD is updating this manual from the 2020 manual to restructure the Research Chapter to elaborate on the research materials and databases and rewrite and make edits in the manual to make it easier to read.



## Introduction

The Plats and Surveys Division's primary function involves identifying topographic features and property boundaries that can influence the design and costs of projects as well as property impacts developed and shown on SHA right of way plats. As the custodian of field survey information, PSD maintains an up-to-date inventory of existing survey data, provided by both in-house and consultant surveyors.

PSD is one of seven divisions in the Office of Highway Development (OHD) in MDOT SHA. The other six divisions are as follows:

- Design Technical Services Division (DTSD) - provides engineering guidance, transportation project reviews, information technology, and other technological support services to other divisions in OHD
- Engineering Resources Division (ERD) – manages contracts, onsite consultants, procurements, fixed assets, sensitive items, state vehicles, and cell phones
- Highway Design Division (HDD) – manages consultant staff and in-house design of most of MDOT SHA's major capital investment projects, leads development for complex major projects, and implements the traffic barrier program and SHA safety audits for State roadways
- Highway Hydraulics Division (HHD) – provides engineering design services specific to highway and site drainage, stormwater management, erosion and sediment control, stream stabilization, culverts, and dams
- Innovative Contracting Division (ICD) –plans, implements, and coordinates of MDOT SHA's design-build program; reviews the plans for utility impacts and

assists coordination efforts with utility owners; manages the bicycle retrofit, new sidewalk, and ADA retrofit capital programs

- Plan Review Division (PRD) – reviews and approves sediment and erosion control and stormwater management projects for MDOT SHA projects, ensures all MDOT SHA plans meet regulatory requirements

The Plats Section investigates and re-establishes existing base lines of right of way, right of way limits, easement locations, and existing boundary lines of adjacent land parcels impacted by roadway improvements. This effort utilizes public and private plats, deeds, and other documents, as well as field monumentation, to determine these outlines. This section computes both right of way acquisitions and conveyances to build the plats and the metes and bounds descriptions around. They also prepare plat descriptions for conveyances, road transfers, and condemnations. PSD supports many clients, such as the other six divisions of OHD, Office of Structures (OOS), the seven District Right of Way and Maintenance Offices, Office of Real Estate (ORE), Maryland Transportation Authority (MTA), the Office of Attorney General (OAG), and private consultants.

A plat is a diagram drawn to scale showing all essential data pertaining to the boundaries and subdivisions of a tract of land, as determined by survey or protraction. A plat should show all the data required for a complete accurate description of the land which it delineates, including the bearings (or azimuths) and lengths of the boundaries of each subdivision. A plat may constitute a legal description of the land and be used in lieu of a written description. (PAGE 196, DEFINITIONS OF SURVEYING AND ASSOCIATED TERMS) PSD specializes in right of way plats. A right of way plat is a plan of a highway improvement showing the old and the new highways and the right of way (or interest in lands) to be acquired. (PAGE 196, DEFINITIONS OF SURVEYING AND ASSOCIATED TERMS)

The field survey unit, the research and technical support center, the CADD mapping and control section, the topographic mapping team, and the geodetic control section all support plat work.



## Chapter I - Research

### Introduction

Research is the systematic investigation into the project area to compile all information available pertaining to the project location. In addition, research is the first step when starting a new project. This serves as an introduction to the area and shows previous work done on site and close by. The research's purpose is to gather useful information that PSD can use to reset the base line and right of way as it exists today. There are six main types of documents that contain this information: construction sheets, deeds, plats, road transfer agreements, State Department of Assessment and Taxation (SDAT) sheets and survey field books. Online databases, most of which MDOT SHA maintains, contain most of these documents. In addition, MDOT SHA has some physical resources that researchers can use to locate the necessary documents.

### Steps to follow when performing private land research

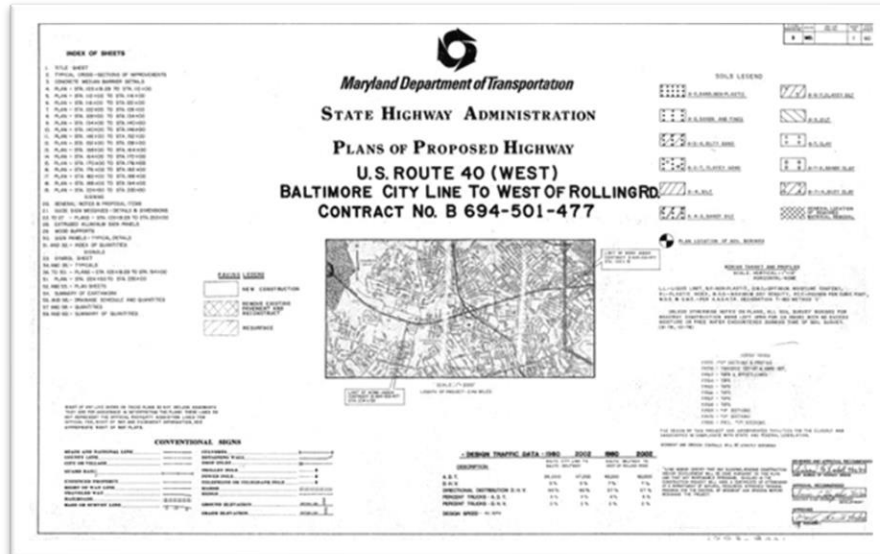
1. From one of the following online sources, save a copy of the tax map from MERLIN, MDPGIS, or DARS site showing the subject property (or properties) and the surrounding properties.
2. From one of the web sites listed above, either save the SDAT sheets for each property.
3. Use MDLANDREC to save the title deeds of each property. For the subject property, search the title back until the description for that property comes out of a larger parcel. Note: The deed research folder contains a .txt file detailing the deed naming convention.
4. Use PLATS.net to save the record plats referenced in the title deeds. Obtain the deed used to create the plat (known as the underlying deed).
5. If an SDAT sheet either does not list a deed reference or has a wrong deed reference, use the Grantor or the Grantee to search for the deed in MDLANDREC.
6. Other useful sites include the local historical societies, Maryland State Archives, the National Archives, and the Library of Congress, to mention a few.

Note: There are several private surveyors in the Baltimore area that have gathered records of other retired surveyors and/or surveying businesses, and those records are available either at no cost or for a fee depending on the individual.

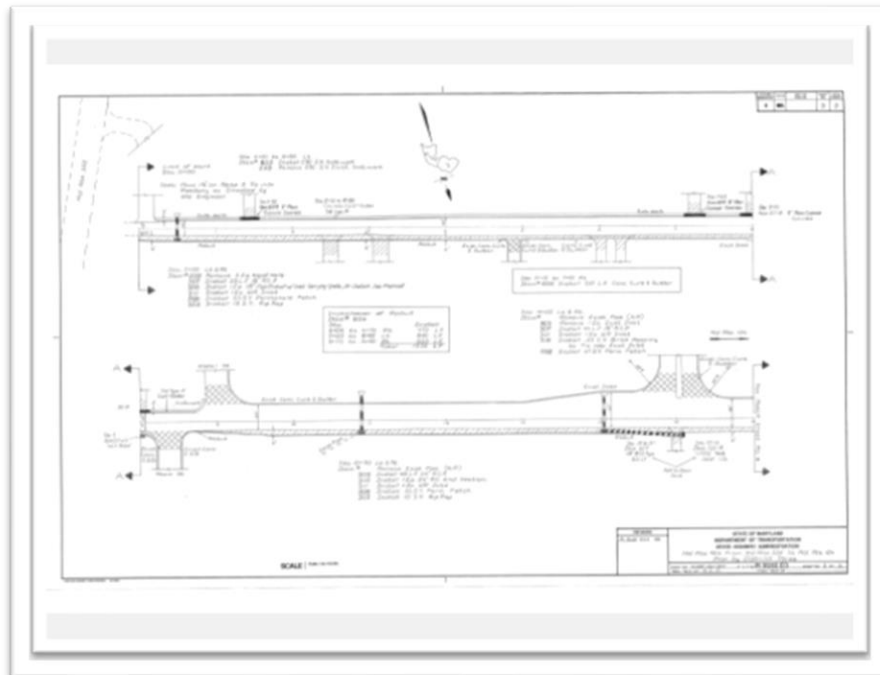
## Core Documents

### Construction and as-built plan sheets

Construction and as-built plan sheets (Exhibit 1 and Exhibit 2) show the engineering design for roadways and bridges. As such, they also contain information about the project history. This can include roadway baseline information, plats used, baseline references, survey field books used, and control.



*Exhibit 1 - Design plan title sheet*  
(Appendix A1 contains an 11x17 printout.)



*Exhibit 2 - Construction plan sheet*  
(Appendix A2 contains a 11x17 printout.)

## Deeds

A deed (See Exhibit 3) is a written document that depicts a change of land ownership rights. In a deed, one person, group of people, or entity, called the grantor(s), gives their ownership rights (or a portion) to another person, group of people, or entity, called the grantee(s). A deed can contain several pieces of information vital to a surveyor, including but not limited to a general location, a metes and bounds description, additional land rights, encumbrances, references to adjoining deeds, monumentation, and previous deeds relevant to the parcel's history. MDLANDREC contains electronic copies of all deeds, and the Deed Room on the second floor of the 211 building in ORE has copies of deeds used either to acquire or to convey land on plats.

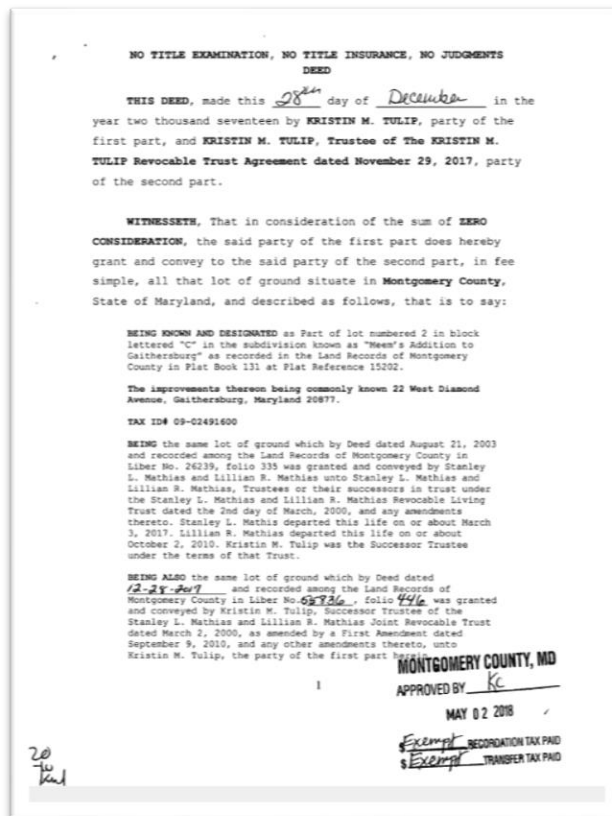
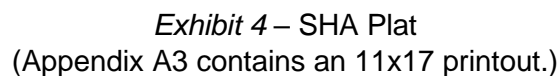


Exhibit 3 – Deed image  
(Appendix B contains a full printout)

Plats (See Exhibit 4), defined in the introduction, depict a road's easement lines, right of way lines, and access rights and show their history through the land transactions referenced on the plat. Most plats reference the deed used for the transaction via some combination of the secretary's number, item number, and liber/folio. The secretary's number is a file number for deeds that ORE maintains. The item number is a file associated with an individual property that ORE oversees. The liber and folio refer to a deed's book and page number, respectively.





**PARCEL 36**  
**NAYLOR MILL ASSOCIATES**  
**(REMNANT OF) DEED 831/163**  
**±53.00 AC.**  
 INTENDED TO BE CONVEYED TO  
 WESTWOOD DEVELOPMENT, LLC

**PARCEL 67**  
**NAYLOR MILL ASSOCIATES**  
**(REMNANT OF) DEED 831/163**  
**±8.94 AC.**  
 INTENDED TO BE CONVEYED TO  
 WESTWOOD DEVELOPMENT, LLC

**U.S. ROUTE 50 FLYOVER**  
**SALISBURY BY-PASS**  
**(R/W VARIES)**

**NAYLOR MILL ROAD - CO RD 431**

**GRAPHIC SCALE**  
 1" = 100' 0"

**WESTWOOD DEVELOPMENT, LLC**  
 & ASSOCIATES, INC.

**BRIAN M. DICKENS**  
 & ASSOCIATES, INC.

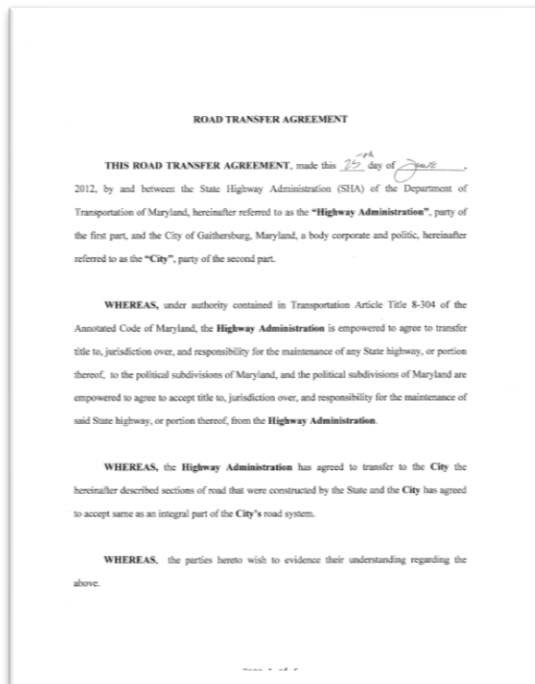
**PLAT DATA**

NO.	DATE	DESCRIPTION	ACRES
1	10/10/00	DEED 831/163	61.94
2	10/10/00	DEED 831/163	61.94
3	10/10/00	DEED 831/163	61.94
4	10/10/00	DEED 831/163	61.94
5	10/10/00	DEED 831/163	61.94
6	10/10/00	DEED 831/163	61.94
7	10/10/00	DEED 831/163	61.94
8	10/10/00	DEED 831/163	61.94
9	10/10/00	DEED 831/163	61.94
10	10/10/00	DEED 831/163	61.94
11	10/10/00	DEED 831/163	61.94
12	10/10/00	DEED 831/163	61.94
13	10/10/00	DEED 831/163	61.94
14	10/10/00	DEED 831/163	61.94
15	10/10/00	DEED 831/163	61.94
16	10/10/00	DEED 831/163	61.94
17	10/10/00	DEED 831/163	61.94
18	10/10/00	DEED 831/163	61.94
19	10/10/00	DEED 831/163	61.94
20	10/10/00	DEED 831/163	61.94
21	10/10/00	DEED 831/163	61.94
22	10/10/00	DEED 831/163	61.94
23	10/10/00	DEED 831/163	61.94
24	10/10/00	DEED 831/163	61.94
25	10/10/00	DEED 831/163	61.94
26	10/10/00	DEED 831/163	61.94
27	10/10/00	DEED 831/163	61.94
28	10/10/00	DEED 831/163	61.94
29	10/10/00	DEED 831/163	61.94
30	10/10/00	DEED 831/163	61.94
31	10/10/00	DEED 831/163	61.94
32	10/10/00	DEED 831/163	61.94
33	10/10/00	DEED 831/163	61.94
34	10/10/00	DEED 831/163	61.94
35	10/10/00	DEED 831/163	61.94
36	10/10/00	DEED 831/163	61.94
37	10/10/00	DEED 831/163	61.94
38	10/10/00	DEED 831/163	61.94
39	10/10/00	DEED 831/163	61.94
40	10/10/00	DEED 831/163	61.94
41	10/10/00	DEED 831/163	61.94
42	10/10/00	DEED 831/163	61.94
43	10/10/00	DEED 831/163	61.94
44	10/10/00	DEED 831/163	61.94
45	10/10/00	DEED 831/163	61.94
46	10/10/00	DEED 831/163	61.94
47	10/10/00	DEED 831/163	61.94
48	10/10/00	DEED 831/163	61.94
49	10/10/00	DEED 831/163	61.94
50	10/10/00	DEED 831/163	61.94
51	10/10/00	DEED 831/163	61.94
52	10/10/00	DEED 831/163	61.94
53	10/10/00	DEED 831/163	61.94
54	10/10/00	DEED 831/163	61.94
55	10/10/00	DEED 831/163	61.94
56	10/10/00	DEED 831/163	61.94
57	10/10/00	DEED 831/163	61.94
58	10/10/00	DEED 831/163	61.94
59	10/10/00	DEED 831/163	61.94
60	10/10/00	DEED 831/163	61.94
61	10/10/00	DEED 831/163	61.94
62	10/10/00	DEED 831/163	61.94
63	10/10/00	DEED 831/163	61.94
64	10/10		

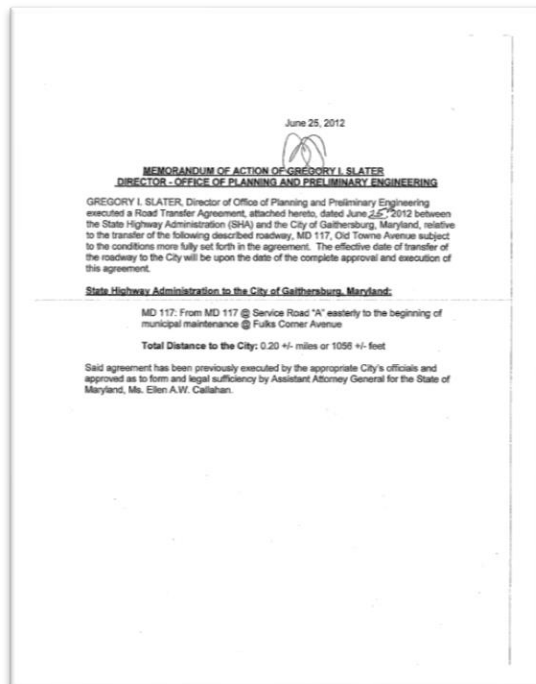
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## Road transfer agreements

Road transfer agreements (RTA) (Exhibit 6) are agreements in which MDOT SHA transfers the ownership and maintenance of State roadways to either a county, municipality, or other government agency. RTAs include the route number, road name, termini, linear distance, and RTA item number. A memorandum of action (MOA) (Exhibit 7) signifies the RTA's execution.



*Exhibit 6 –*  
Road transfer agreement



*Exhibit 7 –*  
Memorandum of action

## SDAT sheets

SDAT sheets (See Exhibit 8) are parcel sheets that give an accounting of a particular parcel's owner, location, value, transfer, and exemption information about a given property. This can include tax account numbers, election district, owner name, mailing and premises address, approximate land area, legal description, deed reference, record plat reference, and previous sellers along with associated deeds. They are only available online, either through using the Maryland Parcel Boundaries Layer on an online Geographic Information System (GIS) interface or using SDAT's search function.

Real Property Data Search ( w4)

Search Result for HARFORD COUNTY

[View Map](#) [View GroundRent Redemption](#) [View GroundRent Registration](#)

**Special Tax Recapture: None**

**Account Identifier:** District - 05 Account Number - 041872

---

**Owner Information**

**Owner Name:** DOOLEY LLC **Use:** RESIDENTIAL  
**Principal Residence:** NO  
**Mailing Address:** C/O DAVID GALBREATH **Deed Reference:** /05048/ 00225  
 105 HOLY CROSS RD  
 STREET MD 21154-1225

---

**Location & Structure Information**

**Premises Address:** PYLESVILLE RD **Legal Description:** 26.03 ACRES  
 WHITEFORD 21160-0000 PYLESVILLE ROAD  
 WHITEFORD PACKING 113/20

**Map:** Grid: Parcel: Neighborhood: Subdivision: Section: Block: Lot: Assessment Year: Plat No: 113020  
 0005 0004B 0011 5010001.13 0000 2022 Plat Ref:

**Town:** None

---

**Primary Structure Built** **Above Grade Living Area** **Finished Basement Area** **Property Land Area** **County Use**  
 26.0300 AC

---

**Stories** **Basement** **Type** **Exterior** **Quality** **Full/Half Bath** **Garage** **Last Notice of Major Improvements**  
 /

---

**Value Information**

	Base Value	Value As of 01/01/2022	Phase-in Assessments	
			As of 07/01/2021	As of 07/01/2022
Land:	217,100	217,100		
Improvements	0	0		
Total:	217,100	217,100	217,100	217,100
Preferential Land:	0	0		

---

**Transfer Information**

Seller:	Date:	Price:
WHITEFORD PACKING CO	12/17/2003	\$0
Type: NON-ARMS LENGTH OTHER	Deed1: /05048/ 00225	Deed2:
WHITEFORD PACKING CO	11/20/2003	\$0
Type: NON-ARMS LENGTH OTHER	Deed1: /00588/ 00498	Deed2:
Seller:	Date:	Price:
Type:	Deed1:	Deed2:

---

**Exemption Information**

Partial Exempt Assessments:	Class	07/01/2021	07/01/2022
County:	000	0.00	
State:	000	0.00	
Municipal:	000	0.00 0.00	0.00 0.00

**Special Tax Recapture: None**

---

**Homestead Application Information**

**Homestead Application Status:** No Application

---

**Homeowners' Tax Credit Application Information**

**Homeowners' Tax Credit Application Status:** No Application **Date:**

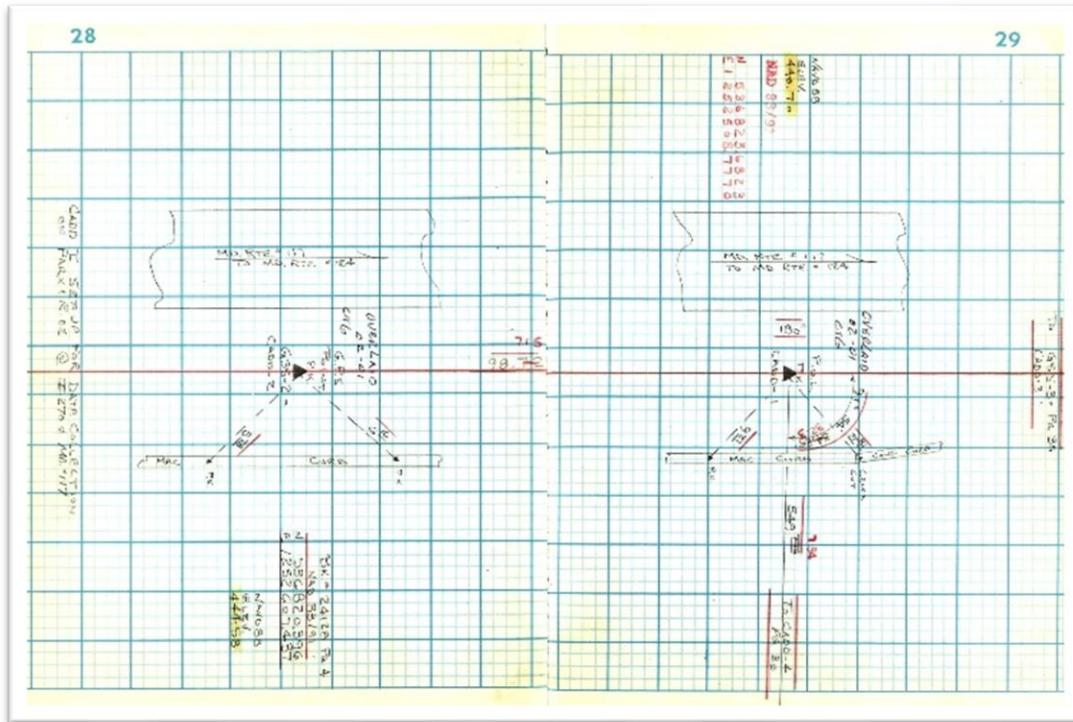
---

1. This screen allows you to search the Real Property database and display property records.  
 2. Click [here](#) for a glossary of terms.

Exhibit 8 – SDAT sheet

## Survey field books

Survey field books (Exhibit 9) are written accounts of the work performed by PSD or consultant field crews. They have valuable information that a surveyor can use to help set the baseline of right of way, e.g., property corners, old traverse, established base line information, right of way monuments, and topography.



*Exhibit 9 – Survey field book page*  
(See Appendix D for a full-size version of this page.)

## Online databases

### MDLANDREC.NET

Link: <https://mdlandrec.net/main/index.cfm>

Note: This database is only available to individuals with an account with the Maryland State Archives. To get an account, the Maryland State Archives must provide the user with login information.

MDLANDREC.NET (See Exhibit 10) is a database run by the Maryland State Archives that contains the deed information for all the counties in the state of Maryland. Users can search by liber/folio, grantor/grantee, and tax id. However, these searches can only trace back to the 1960 or 1970s in most counties. Going any further would require the user to use the active indices. The active indices sort grantors and grantees by both alphabetical order and transaction date. Inside those subsections, MDLANDREC.NET further divides them by surname, where it has the deed references arranged in order of date of transaction. Different counties may organize things differently.

The screenshot shows the Montgomery County section of the MDLANDREC.NET website. At the top, there is a header for Montgomery County with contact information for Karen A. Bushell, Judicial Center, 55 Maryland Avenue, Rockville, MD 20850, and a phone number. Below this is a navigation bar with links: HOME, SELECT NEW COUNTY, RELATED LINKS, HELP, CONTACT US, and END SESSION. The main heading is "Search Montgomery County Land Record Indices". On the left, there is a sidebar menu with links: Tax ID, Instruments, Individual Search, Corporation Search, Individual Soundex, SDAI, Active Indices, Retired Indices, and Plats.net. The main content area has two search sections. The first section is "Jump to new volume" with input fields for Clerk, Book, and Page, and buttons for Go! and Clear. Below this is a note: "NOTE: Search returns single page." The second section is "Tax ID Number Search" with a date range of "Jan. 1, 1977-Feb. 14, 2022 (verified through Feb. 11, 2022)". It includes a "Required fields" section with input fields for Tax ID, AS, and a dropdown for Both. There are also dropdowns for Date Range (All dates) and Sort By (Date Ascending). A note states: "NOTE: This is an exact search." At the bottom, there are buttons for Search! and Clear. The footer contains the text: "MDLANDREC.NET (Version 3.9.0) © Maryland State Archives, 1999-2022. An Online Publication. Use of this website constitutes an agreement by the user to abide by the Archives' Acceptable Use Policy."

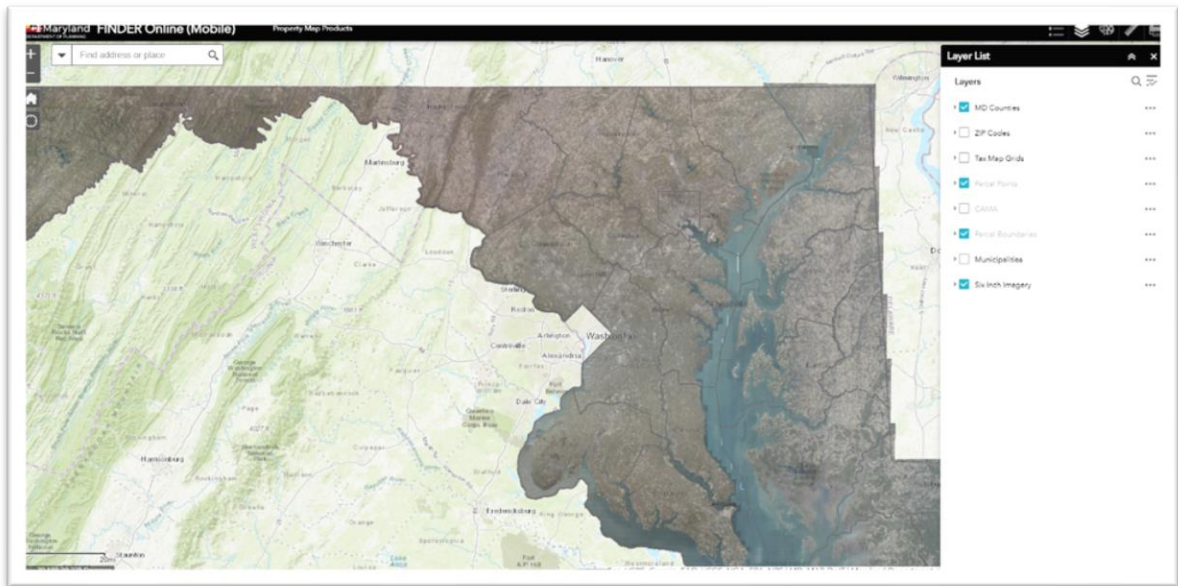
Exhibit 10 – MDLANDREC.NET

## MDPGIS

Link: <https://mdpgis.mdp.state.md.us/findermobile/index.html>

Note: This database does not require an account to use.

MDPGIS (See Exhibit 11) is a database run by the Maryland Department of Planning that contains parcel information placed on a map. In addition to scrolling around, users can search by address and place.



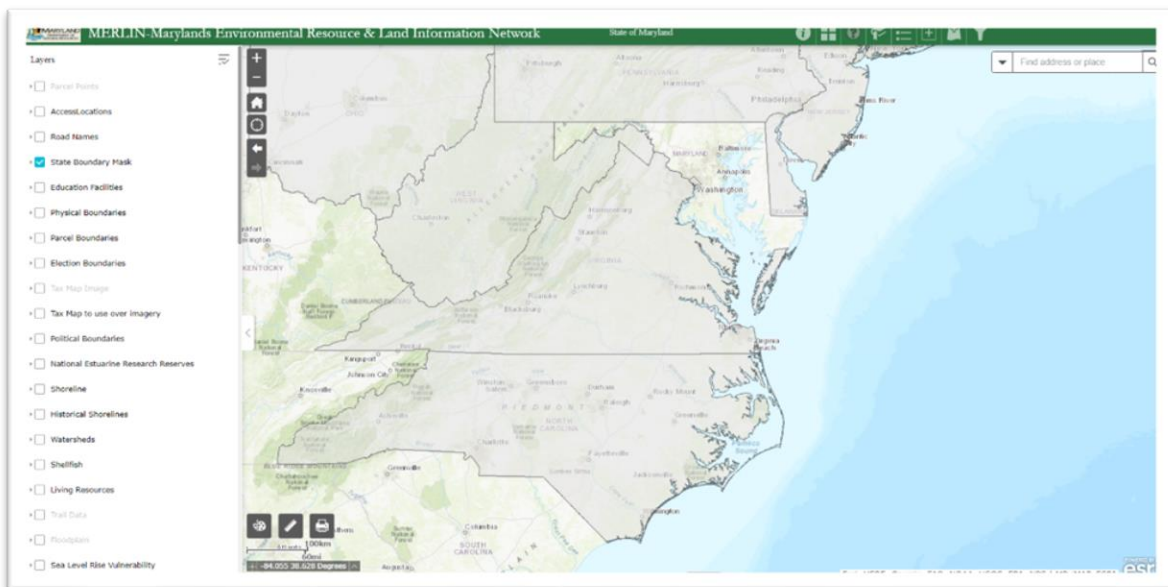
*Exhibit 11 - MDPGIS*

## MERLIN - Maryland's Environmental Resource & Land Information Network

Link: <https://gisapps.dnr.state.md.us/MERLIN/index.html>

Note: This database does not require an account to use.

MERLIN (See Exhibit 12) is a database run by the Department of Natural Resources that contains parcel and tax map information placed on a map. In addition to scrolling around, users can search by address and place.



*Exhibit 12 - MERLIN*



## PLATS.NET

Link: <https://plats.msa.maryland.gov/pages/index.aspx>

Note: This database does not require an account to use.

PLATS.NET (See Exhibit 13) is a database run by the Maryland State Archives that contains land survey, condominium, and subdivision plats. Users can search by plat book/folio, plat number, cabinet number/slot/folio, A-ref number, or description. The home page contains a beginner's guide for new users.

The screenshot displays the PLATS.NET search interface. At the top, a navigation bar includes links for Home, a dropdown menu for SELECT NEW COUNTY, State Highway Plats, Related Links, HELP!, and Contact Us. Below this, the main heading reads "Search Prince George's County Land Survey, Subdivision, and Condominium Plats".

On the left side, there is a sidebar menu with the following options:

- Basic Search
- Advanced Search
- Series Search
- Indexes to Plats
- Miscellaneous Records
- Land Records
- Real Property Search
- Cross Reference

The main content area is titled "Basic Search" and contains several search criteria, each with an input field and "Search" and "Clear" buttons:

- Book Number:** [Input Field] **Page Number:** [Input Field] [Search] [Clear]
- Plat Number:** [Input Field] [Search] [Clear]
- Right of Way Plats:** [Input Field] [Search] [Clear]
- Plat/Drawer:** [Input Field] **File Number:** [Input Field] [Search] [Clear]
- A-Ref Plat Number:** [Input Field] [Search] [Clear]

Exhibit 13 – PLATS.NET



## SDAT – State Department of Assessment and Taxation

Link: <http://sdat.dat.maryland.gov/RealProperty/Pages/default.aspx>

Note: This database does not require an account to use.

SDAT (See Exhibit 14) is a database run by the Maryland State Department of Assessments and Taxation that contains parcel information. Users can search by street address, property account identifier, map/parcel, and property sales.

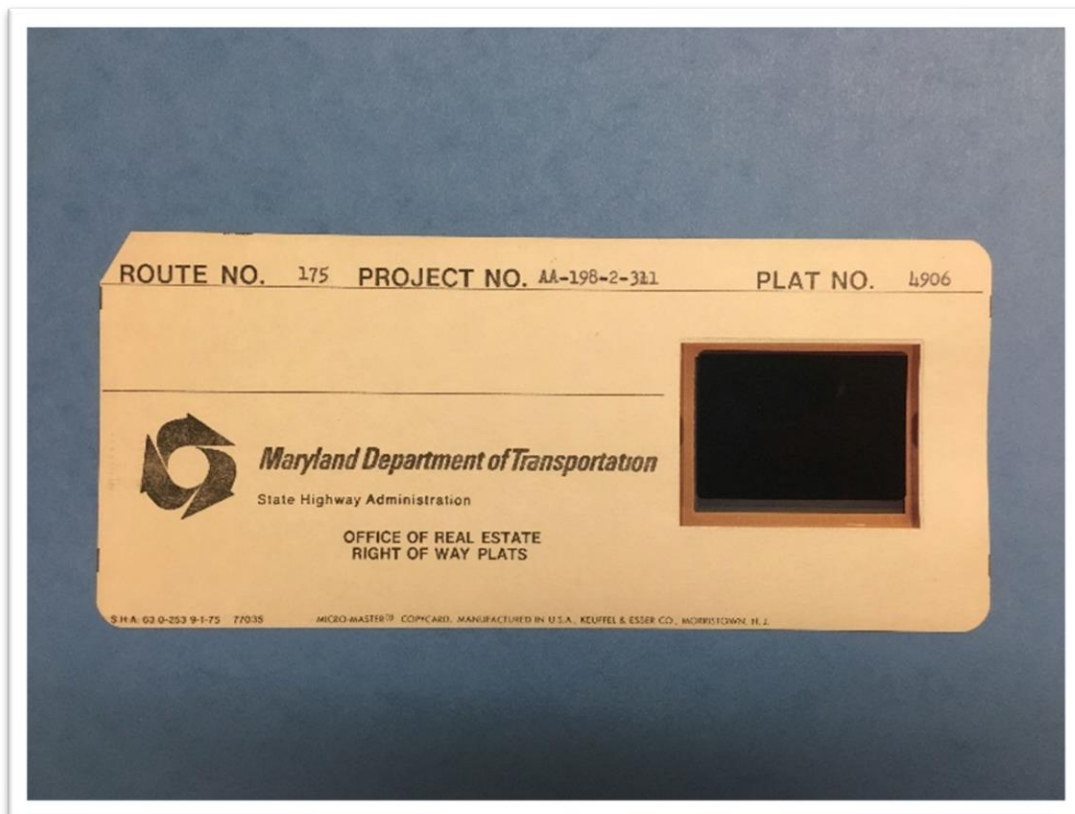
The screenshot shows the 'Real Property Data Search' interface. At the top, there is a teal header with the title 'Real Property Data Search' on the left and a link 'Guide to searching the database' on the right. Below the header, a paragraph of terms of use is displayed, followed by a note about browser compatibility: 'If you experience difficulties using this system try either Internet Explorer, Chrome or Firefox to complete a successful data search.' The main search area contains two dropdown menus: 'Select the county in which to search:' and 'Select the search method to proceed:'. A red maintenance message is visible: 'Real Property Search Page may be unavailable before 7:00 AM for maintenance. Please plan accordingly.' A 'Continue' button with a right arrow is located on the right side. At the bottom, a list of four numbered instructions is provided: 1. This screen allows you to search the Real Property database and display property records. 2. Click here for a glossary of terms. 3. Deleted accounts can only be selected by Property Account Identifier. 4. The following pages are for information purpose only. The data is not to be used for legal reports or documents. While we have confidence in the accuracy of these records, the Department makes no warranties, expressed or implied, regarding the information.

*Exhibit 14 – SDAT search*

## Physical resources

### Aperture Cards

Aperture cards (See Exhibit 15) are a type of punched card with a cut-out window that contains a chip of microfilm. They contain all available correspondence relating to an acquisition or other matters under an item number. All available aperture cards are currently on the second floor of the 211 building in ORE in the drawer labeled “Aperture Cards.” ORE uses a microfilm reader/printer to magnify the image on the aperture card, which the reader screen displays. The user can then print the image to have a physical record.



*Exhibit 15 – Aperture card*

## Control maps

Control maps (See Exhibit 16) show either an entire county or city, alongside all state and federal routes and corresponding contract numbers. ORE last updated these maps in the 1990s. The control map book is on the second floor of the 211 building in ORE near the bookshelves.

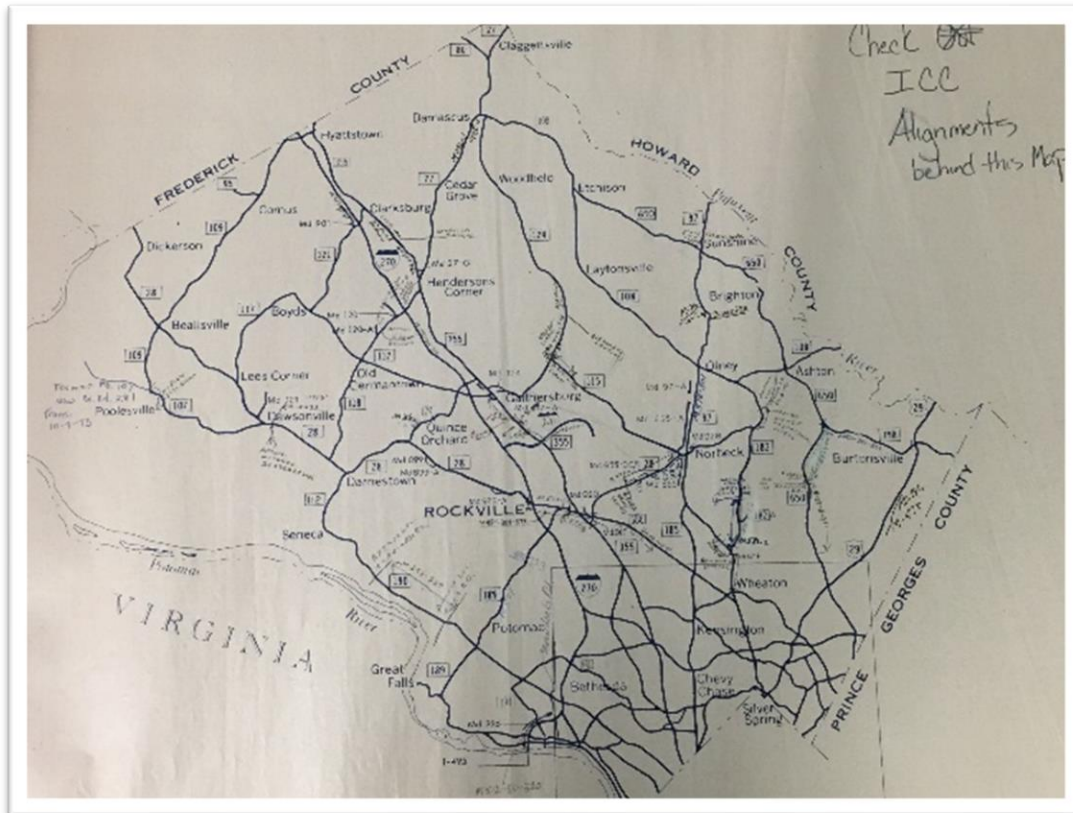
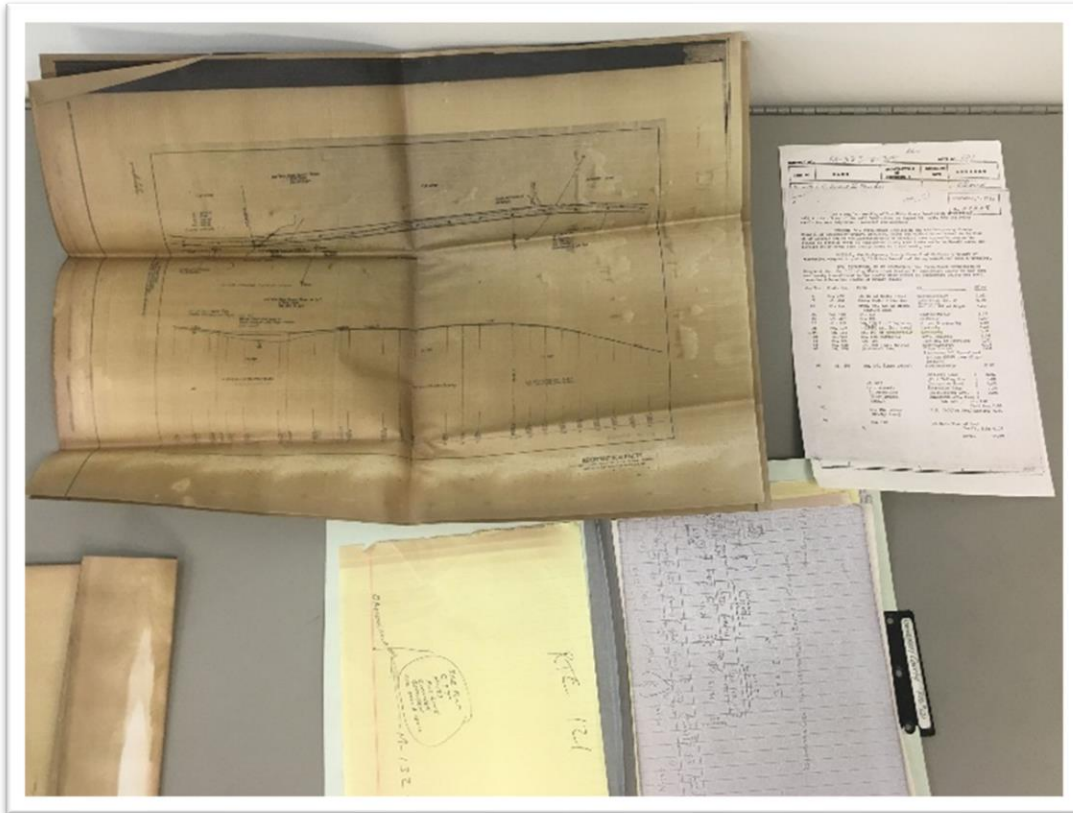


Exhibit 16 – Control map

## Early history files

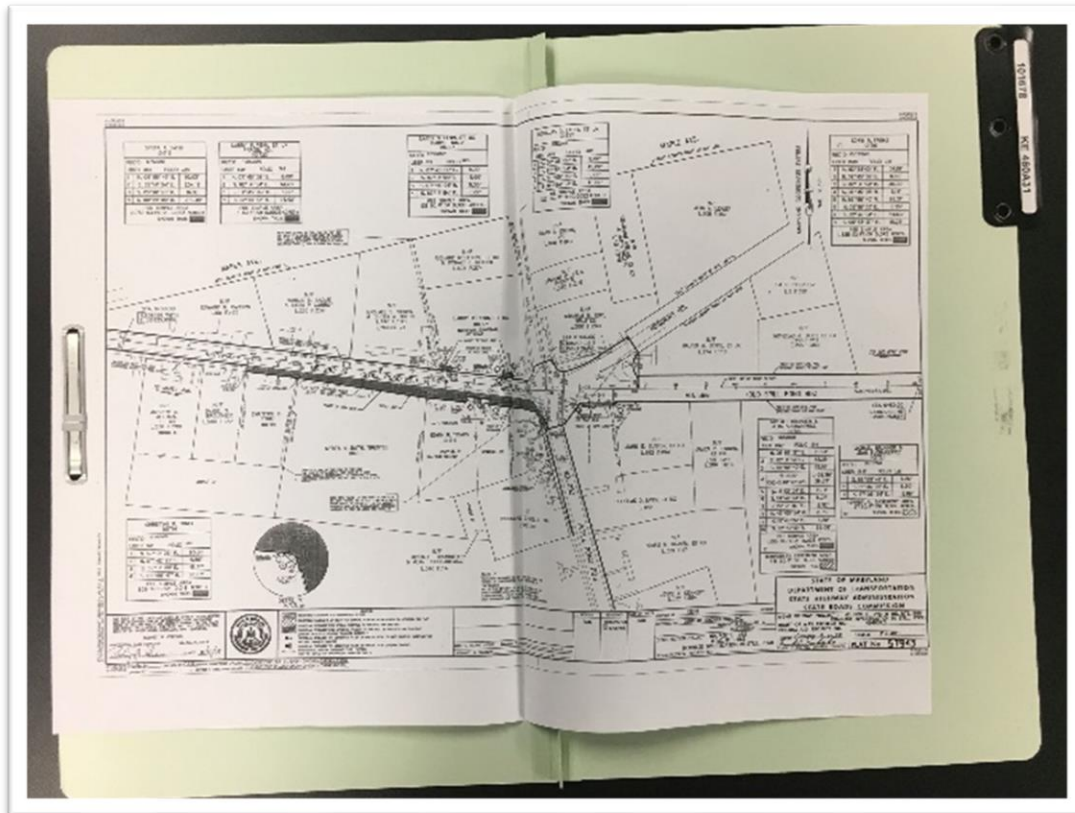
Early history files (See Exhibit 17) include some road life cards and usually have a drawing showing the termini and the various contracts within the termini. They are on the second floor of the 211 building in ORE in the drawers labeled “Early History Files.” See below for an image of some of the types of early history files.



*Exhibit 17 – Early history files*

## Master plat folders

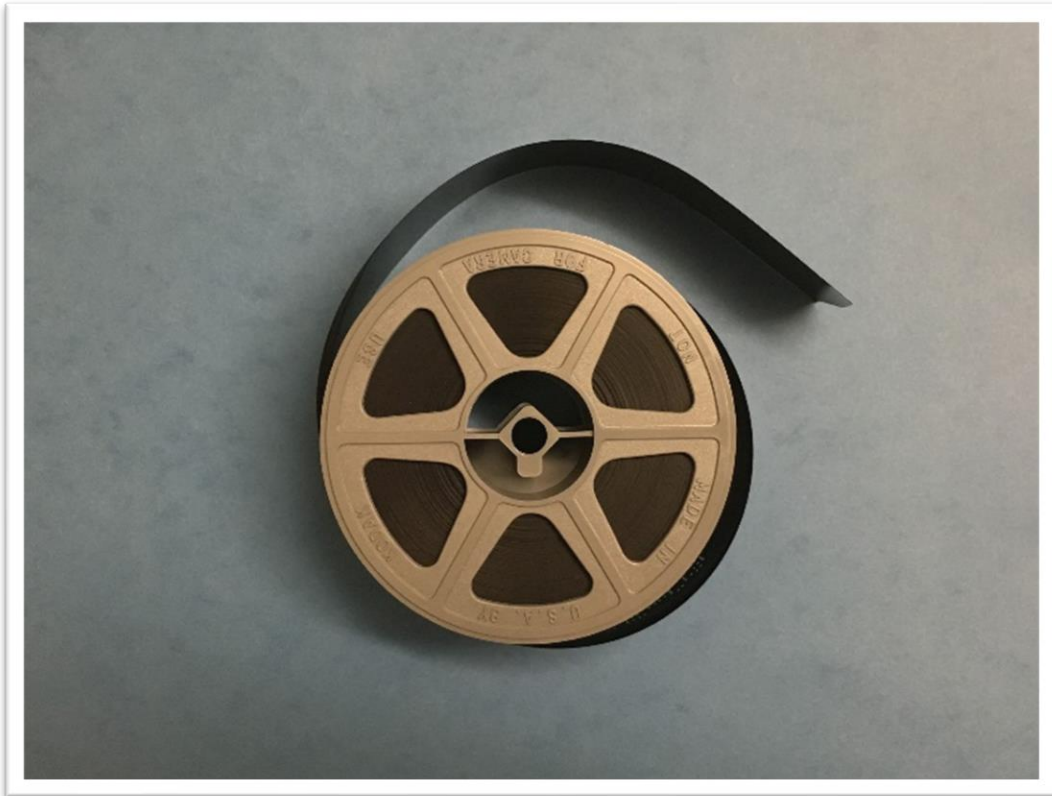
Master plat folders (See Exhibit 18) contain all the plats used for acquisitions for a contract. Yellow cards (See Page 30 for more information on yellow cards.) may reference their location. They are on the second floor of the 211 building in ORE in the drawers labeled "Master Plats." Since the master plats have their unique filing system, there is an index book located among the bookshelves that correlates the contract numbers with the master plat folders.



*Exhibit 18 – Master plat folder contents*

## Microfilms

Microfilms (See Exhibit 19) are photographic images of item files, roadway plans, and deeds stored in a smaller format on a film reel. A single reel of microfilm can hold thousands of images. All available microfilm reels are currently in the drawers labeled “Roadway Plans,” “Deed,” and “Item File” on the second floor of the 211 building in ORE with each reel in a box labeled by range. Like with aperture cards, researchers need to use ORE’s microfilm reader/printer to view and print out the enlarged images.

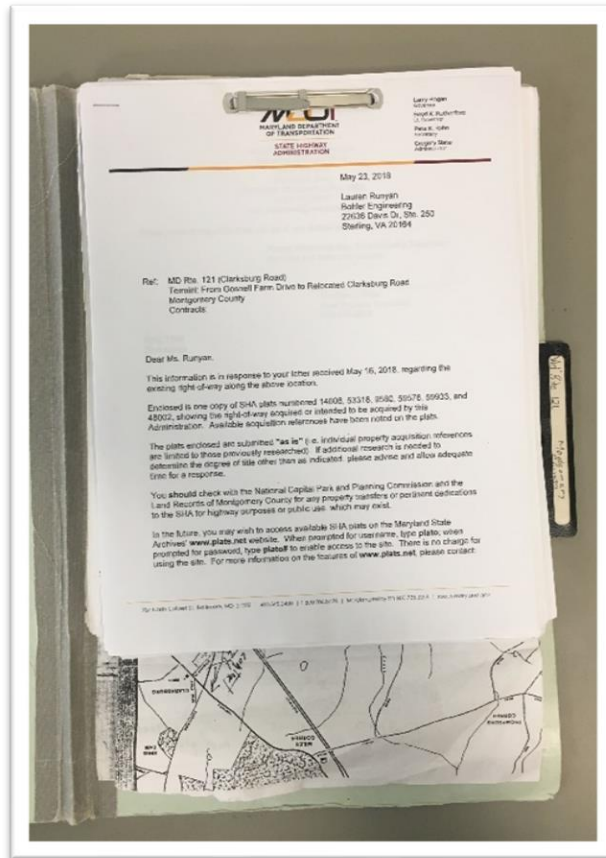


*Exhibit 19 – Microfilm reel*



## Route folders

Route folders (See Exhibit 20) contain the previous research reports, research requests, and maps for a route in question. They are on the second floor of the 211 building in ORE in the drawer labeled “Route Folders.”



*Exhibit 20 – Route folder contents*

## SRC minutes books

The SRC minutes books (See Exhibit 21) consist of a few dozen books depicting the history of State roadways ranging from April 1908 to the present. They show information such as meeting minutes, purchases, maintenance, etc. They are on the second floor of the 211 building in ORE with the older volumes being behind the Master Plat drawers and the newer volumes being with the bookshelves.

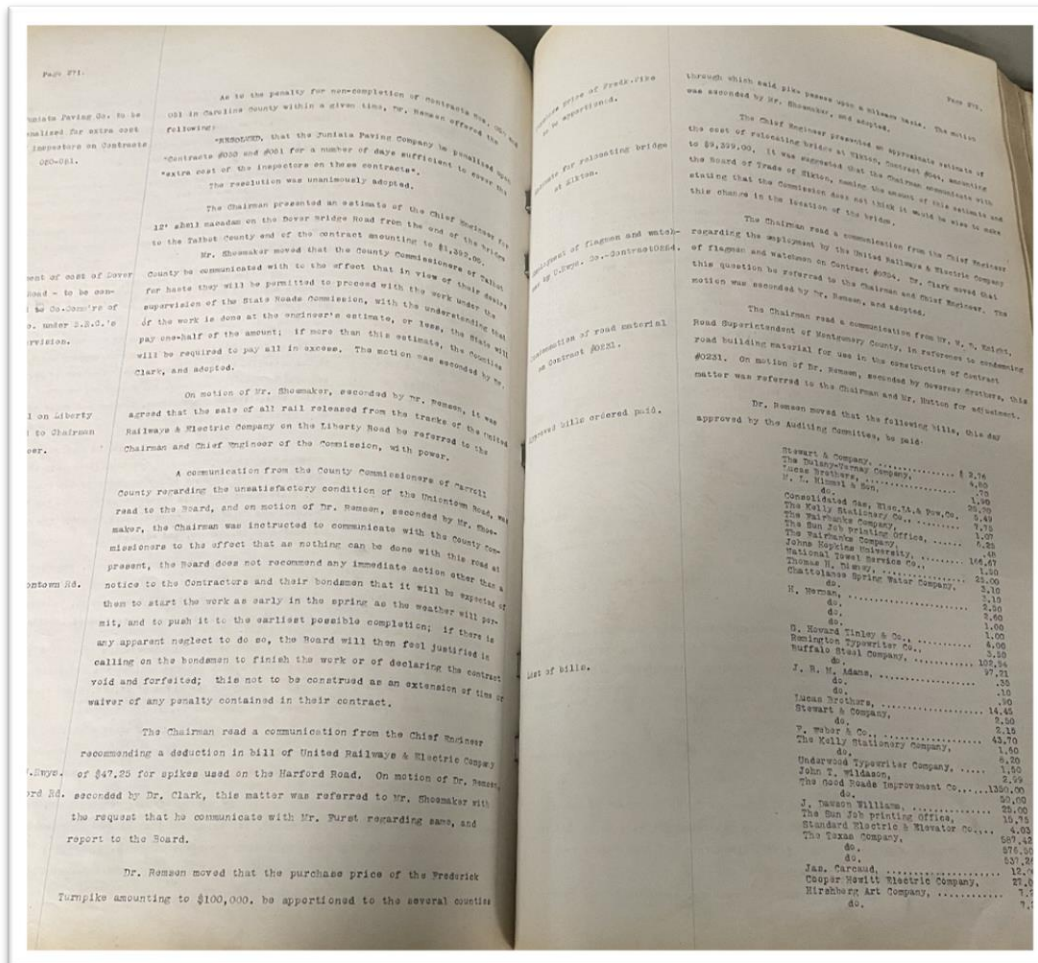


Exhibit 21 – Book contents



## Survey field book indices

The survey field book indices (See Exhibit 22 and Exhibit 23) contain a list of jobs organized by either date (for the oldest indices) or contract number (for newer indices). They are in the PSD Book Room, which is temporarily located on the ground floor of the 707 building in same room as CR EPLD. They cover all survey field books from 1908 to the mid-1990s.

DATE	NAME OF ROAD	BALTIMORE	COUNTY
1-10-32	Singer Property at Halthorpe on the Washington Blvd.	2-10-32	2-10-32
1-10-32	Shoppards - Black Horse	2-10-32	2-10-32
1-10-32	Reloc. of Ellicott City Mill	2-10-32	2-10-32
1-10-32	Profile	2-10-32	2-10-32
1-10-32	Reloc. A	2-10-32	2-10-32
1-10-32	Reloc. B	2-10-32	2-10-32
1-10-32	Butler Rd. - Butler	2-10-32	2-10-32
1-10-32	Davis, Keatley, Dixon & Bailey Prop.	2-10-32	2-10-32
1-10-32	The Homestead Ferry Rd. to the Baltimore Wash Blvd. to the Anne Arundel Co. line	2-10-32	2-10-32
1-10-32	Reloc. of Ellicott City Mill	2-10-32	2-10-32
1-10-32	Old Court Road	2-10-32	2-10-32
1-10-32	Granite to Liberty Rd. Loc. of Gas Line & Extended Sec.	2-10-32	2-10-32
1-10-32	Reisterstown Road Fr. City Line to Slade Ave.	2-10-32	2-10-32
1-10-32	Transit Line	2-10-32	2-10-32
1-10-32	Reloc. of Valley Rd.	2-10-32	2-10-32
1-10-32	Reset Stakes & Recross Sec.	2-10-32	2-10-32
1-10-32	Old Court Rd. Granite - Liberty Rd. Extension	2-10-32	2-10-32
1-10-32	Devils Elbow	2-10-32	2-10-32
1-10-32	Wappa Rd. Carney to Tension	2-10-32	2-10-32
1-10-32	Fuller & Dennis Prop.	2-10-32	2-10-32
1-10-32	Ext. Sections	2-10-32	2-10-32
1-10-32	Grade Elong at Relay	2-10-32	2-10-32
1-10-32	Prop. Thurston	2-10-32	2-10-32
1-10-32	Devils Elbow	2-10-32	2-10-32
1-10-32	Prop. Can Gas Elec Light Power	2-10-32	2-10-32
1-10-32	Arington Ave. 500-Rd. of Lush Blvd.	2-10-32	2-10-32
1-10-32	Prop. Dell Worthington Est.	2-10-32	2-10-32
1-10-32	Old Court Rd.	2-10-32	2-10-32
1-10-32	Maryland School for the Blind	2-10-32	2-10-32
1-10-32	Lines ABCDE	2-10-32	2-10-32
1-10-32	Reisterstown Rd. from Pikesville to Owens Mills - Transit Line	2-10-32	2-10-32
1-10-32	Levels	2-10-32	2-10-32
1-10-32	Mod. of Reverse Curve - Wash Blvd. & Prop.	2-10-32	2-10-32
1-10-32	Reisterstown Rd. Owens Mills - Reisterstown Transit Line	2-10-32	2-10-32
1-10-32	Owens Mills to Reisterstown Transit Line	2-10-32	2-10-32
1-10-32	Transit Line	2-10-32	2-10-32

Exhibit 22 - Inside of a survey field book index

DATE	NAME OF ROAD	BALTIMORE	COUNTY
1-10-32	Singer Property at Halthorpe on the Washington Blvd.	2-10-32	2-10-32
1-10-32	Shoppards - Black Horse	2-10-32	2-10-32
1-10-32	Reloc. of Ellicott City Mill	2-10-32	2-10-32
1-10-32	Profile	2-10-32	2-10-32
1-10-32	Reloc. A	2-10-32	2-10-32
1-10-32	Reloc. B	2-10-32	2-10-32
1-10-32	Butler Rd. - Butler	2-10-32	2-10-32
1-10-32	Davis, Keatley, Dixon & Bailey Prop.	2-10-32	2-10-32
1-10-32	The Homestead Ferry Rd. to the Baltimore Wash Blvd. to the Anne Arundel Co. line	2-10-32	2-10-32
1-10-32	Reloc. of Ellicott City Mill	2-10-32	2-10-32
1-10-32	Old Court Road	2-10-32	2-10-32
1-10-32	Granite to Liberty Rd. Loc. of Gas Line & Extended Sec.	2-10-32	2-10-32
1-10-32	Reisterstown Road Fr. City Line to Slade Ave.	2-10-32	2-10-32
1-10-32	Transit Line	2-10-32	2-10-32
1-10-32	Reloc. of Valley Rd.	2-10-32	2-10-32
1-10-32	Reset Stakes & Recross Sec.	2-10-32	2-10-32
1-10-32	Old Court Rd. Granite - Liberty Rd. Extension	2-10-32	2-10-32
1-10-32	Devils Elbow	2-10-32	2-10-32
1-10-32	Wappa Rd. Carney to Tension	2-10-32	2-10-32
1-10-32	Fuller & Dennis Prop.	2-10-32	2-10-32
1-10-32	Ext. Sections	2-10-32	2-10-32
1-10-32	Grade Elong at Relay	2-10-32	2-10-32
1-10-32	Prop. Thurston	2-10-32	2-10-32
1-10-32	Devils Elbow	2-10-32	2-10-32
1-10-32	Prop. Can Gas Elec Light Power	2-10-32	2-10-32
1-10-32	Arington Ave. 500-Rd. of Lush Blvd.	2-10-32	2-10-32
1-10-32	Prop. Dell Worthington Est.	2-10-32	2-10-32
1-10-32	Old Court Rd.	2-10-32	2-10-32
1-10-32	Maryland School for the Blind	2-10-32	2-10-32
1-10-32	Lines ABCDE	2-10-32	2-10-32
1-10-32	Reisterstown Rd. from Pikesville to Owens Mills - Transit Line	2-10-32	2-10-32
1-10-32	Levels	2-10-32	2-10-32
1-10-32	Mod. of Reverse Curve - Wash Blvd. & Prop.	2-10-32	2-10-32
1-10-32	Reisterstown Rd. Owens Mills - Reisterstown Transit Line	2-10-32	2-10-32
1-10-32	Owens Mills to Reisterstown Transit Line	2-10-32	2-10-32
1-10-32	Transit Line	2-10-32	2-10-32

Exhibit 23 - Inside of survey field book index

Yellow cards (See Exhibit 24) show the county, route number, project number, item number, the person or entity from whom acquired, and location in the Master Plat Files. Yellow cards are on the second floor of the 211 building in ORE beside the Master Plat drawers.

[illegible]

*Exhibit 24 – Yellow cards*



## Chapter II – Mosaics

### Introduction

A mosaic reflects the information found during research in a visual format. It is where PSD analyzes the property descriptions to see how they initially fit together and gives an overview of what the field crew needs to search for. A good mosaic is an inclusive sketch of what the title and adjoining property lines look like, along with title and monumentation calls. There are two types of mosaics: the right of way mosaic (focuses on State right of way lines) and the property mosaic (focuses on property lines). Shown below are two mosaic examples (Exhibit 25 and Exhibit 26).

### Mosaic components

- Base line of right of way
  - Theoretical line, frequently located in the middle of a roadway, that the other lines (usually right of way and easement lines) are based off
  - Found on SHA plats
  - Three shapes
    - Straight line
    - Curve (tangential)
    - Spiral (tangential)
- Base line references
  - Monuments set off the base line of survey (found in survey field books and frequently the same as the base line of right of way) at a specified distance so it can be located at a future time
  - Only necessary if the mosaic is getting field work performed
    - See Chapter III - Field Work for more information
  - Show any references on the mosaics that are set for cardinal points on the base line
    - Label book and page number for each
  - Spur lines can help PSD find evidence to help set the base line
  - Pre-1970 references are usually hub & tack, which may be hard to find due to the wood rotting away
  - Traverses coming off pre-1970 base lines can help locate property evidence
    - More accurate than right angle topography

- Hand pulls can help set traverse/base line points if references cannot be located
- Existing easement lines and easements of record
  - Land area that SHA has long-term usage rights but does not own
  - Found on deeds and SHA plats
  - May want to check for deeds to confirm item number transactions depicted on previous plats
  - See Appendix E for an explanation on the four main types of easements
- Existing right of way (ROW) lines
  - Land area that SHA owns and incorporates into a roadway
  - Found on SHA plats
  - May want to check for deeds to confirm item number transactions depicted on previous plats
- North arrow
  - Shows the mosaic's directional orientation
  - Shows the horizontal datum, e.g., NAD 27, NAD 83, NAD 83/91
- Parcels
  - Depict property line information
    - Bearing
    - Distance
  - Drawn by deed description or a subdivision plat
  - Found using some of the tools mentioned in Chapter I - Research
  - Include the following parcel information:
    - Source of the property information, e.g., liber and folio, record plat, SHA plat, valuation map, survey field book, or an unrecorded plat
    - Current owner names and/or tax map and parcel data
    - Error of closure with bearing and distance
    - Information on the property corners and whether a field crew previously found, set, or monumented them
    - Property calls, e.g., monuments, roads, adjoiners, etc.
  - Scrivener's error
    - Typographic error
    - How to solve
      - Search the title back until the description corrects itself or it comes out of a larger parcel
      - Complete the boundary determination
      - Evaluate the adjoiners' calls
- Scale
  - Shows a mosaic's scope when on a print sheet
- Title block
  - Name of the mosaic's creator
  - FMIS number
  - Date
  - Any other relevant notes

### Other considerations when preparing a property or right of way mosaic

- Point numbers for deed parcels, right of way lines, base lines, easements, and meets and bounds property monumentation should be within the point ranges specified by the ics file:
  - 1-2999 for existing points
  - 3001-3499 for traverse points
  - 3501-3999 for existing monumentation
  - 4001-4999 for deed points
  - 5001-5999 for base line points
  - 6001-6999 for existing right of way points
  - 7001-7999 for existing easement points
  - 8001-8999 for proposed right of way points
  - 9001-9999 for proposed easement points



*Exhibit 25* - Mosaic example showing the base line (yellow), right of way (orange), parcels (multiple distinct colors), and north arrow in a way so that both the field crew and surveyor can easily identify them







## Chapter III - Field Work

### Introduction

A mosaic shows everything the surveyor found during research. Field work is necessary to create the workmap. Evidence found in the field is what allows the surveyor to translate the mosaic information into real world lines set on the ground. All metes and bounds survey requests go to the Survey Assistant Division Chief and Senior Area Engineer. Please refer to the PSD Field Procedures Manual for more details regarding field work.

#### Information the surveyor should provide to the area engineer

- A complete mosaic of the area in CADD format
- A PDF of the mosaic overlaid on aerial imagery
  - Split bigger areas into multiple plots (Use sensible match marks.) for easier handling by field crews
- Copies of any plats, deeds, survey books, bridge plans, or other documented material used in the creation of the mosaic, as requested by the Area Engineer
  - If the crew cannot find the specified monumentation, they can use the hand pulls to help find the references
- A .csv file containing point numbers, coordinates (northing, easting, and elevation), and descriptions for search points of possible monumentation
- Instructions of what to look for and what evidence to gather based on research
- Existing traverse information from MDOT SHA in the area

### Information the surveyor should receive back from the field

- A printed copy of the mosaic with markings for all points found or looked for
  - Assume the field crew did not look for unmarked points.
- A DGN file that contains all field located evidence
  - The area engineer should label evidence clearly with as much detail as possible, e.g., condition of the evidence found (is it bent or damaged?), property cap information, pipe size, etc.
- A point dump of coordinates for all field located evidence
- Copies of the bookwork for the location of the evidence
- Two pictures for each piece of evidence located, one showing detail and one showing context

### Variables that can affect field work delivery time

- Property notification letters
  - Approval from The Directors Office (TDO) to send letters out
  - Sent to all property owners whose property PSD needs to access
  - 30 day waiting period
- Number of field searches
  - if adjoining evidence requires re-evaluation, the field crew may make additional attempts
  - 15' search radius for a property marker
- Public and private property owners
  - Often know little about State projects
  - Some may be inquisitive, some hostile, and some simply curious
- Weather
- Obstructions
- Vegetation
- Traffic
- Availability of survey control points

### Other field work considerations

- Type of road and average daily traffic (ADT)
- Weather conditions (season that the field crew is performing the survey)
- Condition of the area the field crew is surveying, i.e., is it open, allowing the field crew to use Global Positioning System Real Time Kinematic (GPS RTK), or is a conventional survey necessary
- Crew safety measures, availability, and affordability
- Time for approval of the work request (if it is a consultant)
- Available funds for consultant firms





## Chapter IV – Workmaps

### Introduction

A workmap reflects all the research prepared on a mosaic and field effort done to establish property lines and base lines. It documents the Professional Licensed Surveyor's determination of where the lines are in the real world. Surveyors use workmaps to build plats, descriptions, and other record documents. It should clearly reflect what evidence the field crew looked for, what evidence the surveyor found and held, and how the surveyor established the property lines. This process is known as boundary determination.

In preparing a workmap, the surveyor makes decisions on which evidence to use to set the boundary. If both the evidence in the field has no signs of a third party disturbing it and the field crew finds it as described in the deed, then there is a good chance that the monument can help to set the boundary. On the other hand, if the monument has signs that a third party has disturbed it or is a different material compared to what the deed describes, the surveyor should not use those monuments in the final determination.

A workmap, in contrast to a mosaic file, cannot have a step-by-step guide on how to create the document because it is going to depend on the calls of individual property descriptions, existing roads and monuments, found evidence, and if the description calls for them. For example, a description can call for a concrete monument in the northernmost point of the parcel, but the field crew finds a rebar and cap instead. Though not called for, the surveyor can still use the rebar and cap.

### Order of importance to re-establish SHA base line of right of way

1. Recovered monumented base line station and/or offset references, as shown in SHA centerline survey books (e.g., rebar & caps, x-cuts, P.K. nails, SHA/RR spikes, iron pipes)
2. Recovered monumented base line stations and/or swing-tie references along base line spurs, as shown in SHA survey books
3. Recovered property corner evidence, as shown in SHA metes and bounds books (Reference these property corners to the original base line.)
4. SHA bridge plans (if a bridge is nearby) and located key points on the bridge structure referenced to the base line (e.g., center of bridge joints or piers where they cross the base line)
5. Old topographic features shown in SHA survey books referenced to the base line (e.g., fire hydrant, house corners, gas valves, utility poles, and property corners are sometimes located in topo books)
6. Roadway surface and/or construction plan detail

### Order of importance to re-establish boundary

Surveyors work with recovered boundary evidence and recorded information based on a doctrine of priorities. Surveyors weigh them from greatest to least in the following order:

1. Lines run in the field (established by the original surveyor)
2. Adjoiners
3. Natural monuments (trees, large stones, streams, etc.)
4. Artificial monuments (rebars and caps, concrete monuments, pipes, etc.)
5. Courses
6. Distances
7. Area (intended area of property)
8. Coordinates (state plane or other)

### List of situations encountered while creating a workmap

- The field crew cannot find the monumentation called for.
- A state or county road has undergone geometric changes.
- The field crew finds a monument type other than what the deed calls for, e.g., the description calls for a stone monument, but the field crew finds a pipe.
- The field crew finds the monument called for, but a third party has disturbed it.
- The field crew finds the monumentation called for, but the distance is different from what the description says.

## Base line re-establishment without SHA plats

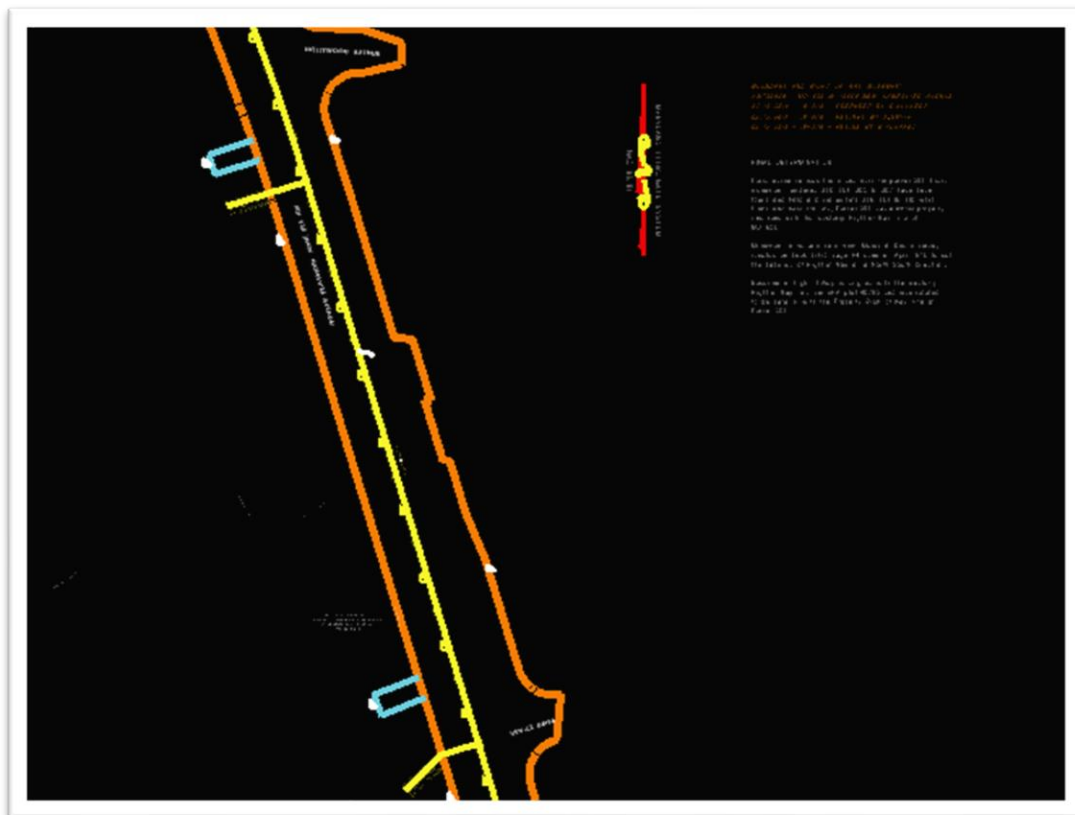
- Receive determination from Records and Research.
  - Turnpike
  - Charter
  - Ordinance
- A city or municipality may have established an ordinance.
- District 2 is known for setting right of way monuments very accurately.
- On the Eastern Shore, the center of a concrete roadway is the actual center of right of way and not the center of the whole paved width.
- Local jurisdictional anomalies abound.
- The surveyor may need to use prescriptive width, i.e., what SHA has maintained for 20 plus years, which may include ditches.
- Use common sense, roadway surfacing, and adjoiner geometry to establish a base line where none exists.

## Types of workmaps

PSD produces two types of workmaps as a deliverable to its clients: the right of way workmap and the boundary workmap.

### Right of way workmap

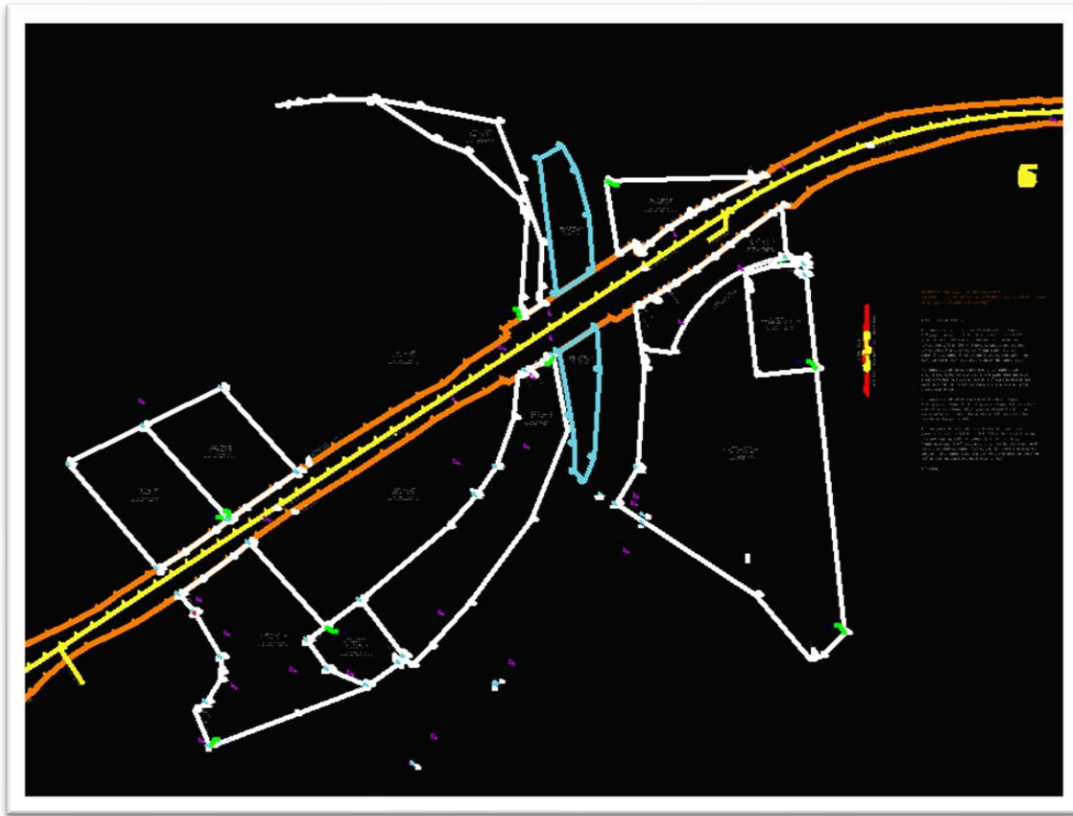
A right of way workmap (See Exhibit 28) determines the land area the State of Maryland owns in a project area. This allows the designer to know if the State can complete the project within the existing right of way or if it needs to acquire something. The designer should also include a right of way mosaic on the request. It is the surveyor's responsibility to talk to the requestor and discuss the limits for the workmap after the surveyor finishes the mosaic.



*Exhibit 28 - Right of way workmap for MD 650, including a north arrow, bar scale, and surveyor's report*

## Boundary workmap

A boundary workmap (See Exhibit 29) plots the boundary or property lines present in the project area to help determine where impacts are. The designer should request a boundary workmap when there are known impacts outside of the existing right of way. If the requestor does not know if work is going to impact private property, the designer should request a subsequent survey request when more information is available.



*Exhibit 29 - Boundary workmap*

Boundary workmap showing the parcels that the designer either is or might be impacting, existing right of way lines, base line(s) of right of way, traverse points, existing easement lines, monumentation found, the north arrow indicating which coordinate datum the surveyor used, and the surveyor's report

## Steps to creating a workmap

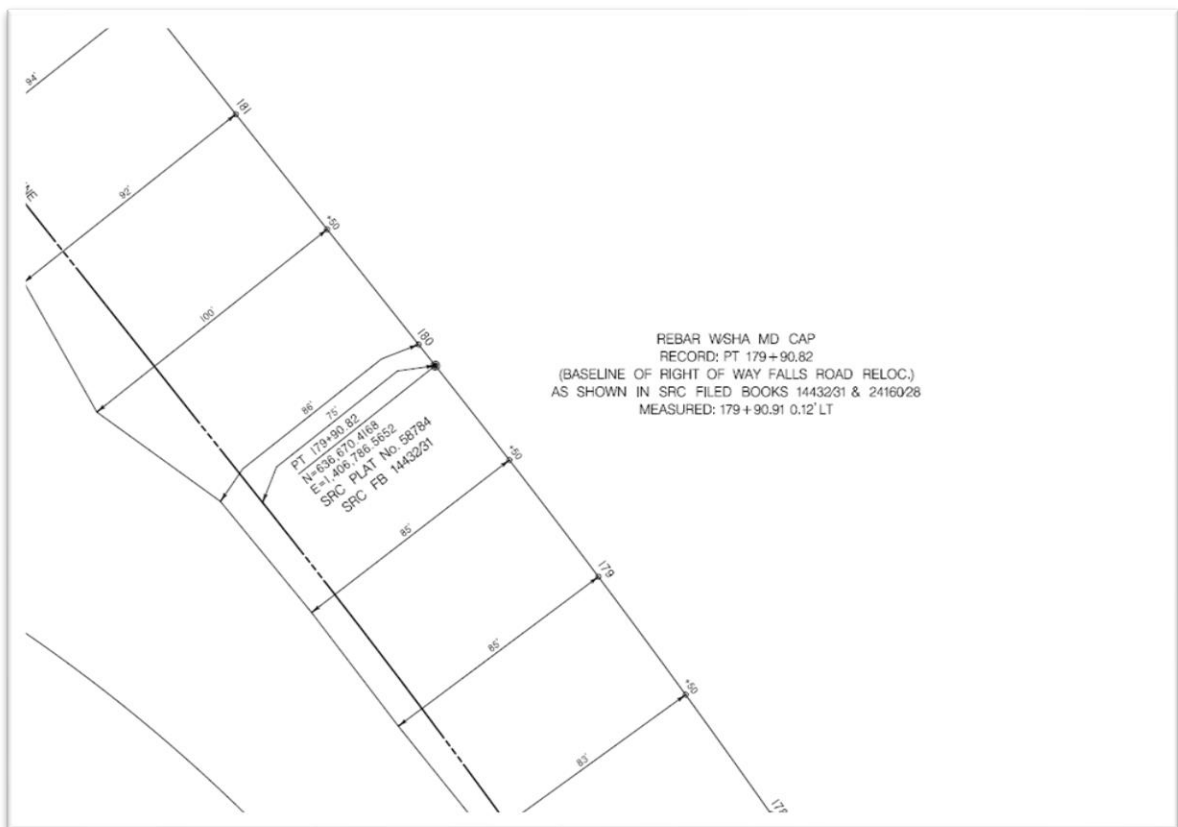
1. Open the 2D workmap file. The name is going to be something like mWM-0001\_m000.dgn.
2. Reference the mosaic file (mMO-E001\_m000.dgn) and the metes and bounds file (mMB-E001\_m000.dgn) into the workmap file.
3. Compare field evidence located, as shown on the meets and bounds file, to property corners, as shown on the mosaic, to verify differences in distances and angles between the two files.
4. After selecting which monuments to hold for corner or line to position the descriptions from deeds and subdivisions, rotate the base lines, the rights of way, easements, and parcels based on the monuments held and redrawn.
  - a. Note: Intersect parcel lines with the right of way in the workmap when the description calls to do so. There should be no duplicate lines or duplicate point numbers (e.g., one on top of another, two numbers with the same coordinate) in the workmap. For example, if the surveyor is holding the monument found at Point 357 but not its field observed coordinate, label the points accordingly. If Point 357 is an IP (iron pipe) found and held on the right of way line, then Point 6027 may be the computed corner that is near Point 357. Label all intersection points on the established right of way line.
5. After drawing all the lines, annotate them in the drawing: lines of division, existing right of way lines, limits of existing easement, base lines of right of way, road names, property information, etc.
6. Add the final information, such as a title block (Cell 200), north arrow, a scale, project information, and, most importantly, a summation of the surveyor's report. The surveyor's report summarizes the process on how the surveyor determined the boundary lines, right of way lines, base lines of right of way, and which monuments to hold.

## Surveyor's report

The surveyor's report contains a sequence of field operations, a summary of all findings, and a documented process for determining boundaries and/or right of way lines. There are two options for the surveyor's report: the ics format (Exhibit 30) and the narrative format (Exhibit 31). The ics format lists off each monument, one at a time, detailing the monument type, which source references it, where it is supposed to be, where the field crew found it, and any special notes about it. The narrative format lists out all the pertinent details regarding the survey and monumentation.

```
## 330; RC WITH SHA MD CAP
## NOTE: BELIEVED TO BE PT 179+90.82
## SRC FIELD BOOK: 14432/31 & 24160/28
## RECORD: 179+90.82
## MEASURED: 179+90.91 0.12' LEFT
```

*Exhibit 30* – Ics format of the surveyor's report detailing a monument found in the field



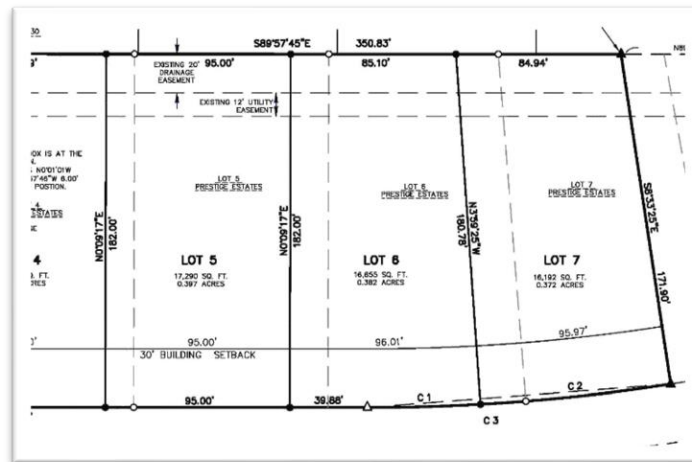
*Exhibit 31* – Close-up of a workmap showing a monument and its associated description



## List of items a surveyor's report may contain

- Company/Surveyor's Information
  - Address
  - Contact number
  - Email address
  - Name
  - Surveyor-in-charge/position or title
- Project Information
  - SHA FMIS No.
  - Company Project No.
  - Company Project Manager / Area Engineer / Team Leader
  - Client Information
    - Address
    - Contact number
    - Email address
    - Name
- Purpose of the survey
- Project location/address
- Survey Information
  - Date of the last day of field work on the project
  - Control
    - Horizontal datum
    - Method used to determine datum/realization
    - Control adjustment method/results
    - Calibration/localization results and VRS service provider
    - Type of coordinates (grid/ground)
    - Project grid/ground combined scale factor
    - Survey units
  - Equipment
    - Model and serial numbers of instrumentation
    - Calibration certificates
  - Personnel
    - Field crew names/titles
    - Office staff names/titles
    - Certified QA/QC checklist
    - Daily crew cards/log sheets
  - Records examined (including but not limited to)
    - SHA right of way plats
    - County right of way plats
    - Easement plats/descriptions
    - Subdivision plats
    - Condominium plats
    - Deed descriptions
    - Equity & will records
    - Field book notes
    - Grantor/grantee indices search
    - Public survey records
    - Private survey records
    - Government survey records

- Parole evidence
  - Patent records
  - Photographs
  - Contacts/conversation logs pertinent to the survey
- Property notification letters
  - Include sample letter
  - Names and addresses used for delivery
- Surveyed parcel/lot Information
  - Tax map (with property highlighted)
  - SDAT sheet
  - Current title deed/description
  - Current plat (if applicable)
  - Clear chain of title (at least back to the parent tract)
  - List of encumbrances (servient/dominant estates of the subject property, etc.)
  - List of right of way/easement plats
  - Deed/plat mosaic based on current title description and any prior descriptions, as necessary
  - Description of any differences between current/prior descriptions (include mathematical closures)
  - Narrative explaining, in detail, method used to establish/re-establish each corner for the above parcel/lot
    - Include any noteworthy information that may be instrumental in re-establishing the same property corner in the future.
    - Include differences between measured and record survey angle/distances.
  - Any perceived title issues uncovered while preparing the survey, without expressing a legal opinion as to the ownership or the nature of a potential encroachment, e.g., perceived gaps, overlaps, encroachments
- Final survey data
  - Signed and sealed work map (boundary survey)
  - Signed and sealed metes and bounds description (if applicable)
  - Final ASCII (American Standard Code for Information Interchange) coordinate list for all project points
  - Final area computations for each surveyed parcel
  - Certified final deliverable check list based on scope
  - Certificate satisfying COMAR (Code of Maryland Regulations) 09.13.06



## Chapter V – Plats

### Introduction

**Plat definition:** A diagram drawn to scale showing all essential data pertaining to the boundaries and subdivisions of a tract of land, as determined by survey or protraction. A plat should show all the data required for a complete accurate description of the land which it delineates, including the bearings (or azimuths) and lengths of the boundaries of each subdivision. A plat may constitute a legal description of the land and be used in lieu of a written description. (PAGE 196, DEFINITIONS OF SURVEYING AND ASSOCIATED TERMS)

**Plat, right of way:** A plan of a highway improvement showing the old and the new highways and the right of way (or interest in lands) to be acquired. (PAGE 196, DEFINITIONS OF SURVEYING AND ASSOCIATED TERMS)

## Plat drafting

To draft a plat, there are rules to follow. Some depend on the drafter's preferences. For a DGN file, every type of line has an associated color (Note: Color numbers are based on Microstation V8 Select Series 10.):

- Base line of right of way – Yellow (4)
- Existing easement – Light blue (11)
- Existing right of way lines the State is relinquishing – Orange (13)
- Property lines – White (0)
- Proposed easement (perpetual or temporary) – Pink (12)
- Right of way (proposed) or to remain – Red (3)

PSD has established drafting standards for all manner of plats: line weight and style, text size and font, note language and placement in relation to each line type, north arrow, and most other plat elements. PSD has written these standards in two "Plat Guidelines" documents, one for linework (found in Appendix F) and one for text size (found in Appendix G), and the Plats and Surveys Division Drafter's Checklist (found in Appendix H). Refer to COMAR 09.13.06 for the minimum standards of practice for Professional Land Surveyors.

Within MicroStation, under *Barmenus* under the heading *MDOT SHA*, there is a Plats and Surveys Plat Workmap Model (mPL) that, when opened, creates a selectable list of each line type and shading type for easements, right of way, property, acquisitions, conveyances, etc. PSD also has the Plats Cell Library (current as of May 19, 2022), home to a collection of commonly used graphical figures, thus taking the guesswork out of which note, text size, font, etc. to use for the various elements within the plat. Finally, PSD has developed internally a drafting tool called More COGO Plotting Commands (MCPC), which assists with drafting the metes and bounds boxes, base line labeling, and station offset labeling, to name a few. See Exhibit 32 for an example of a finished plat in CADD.

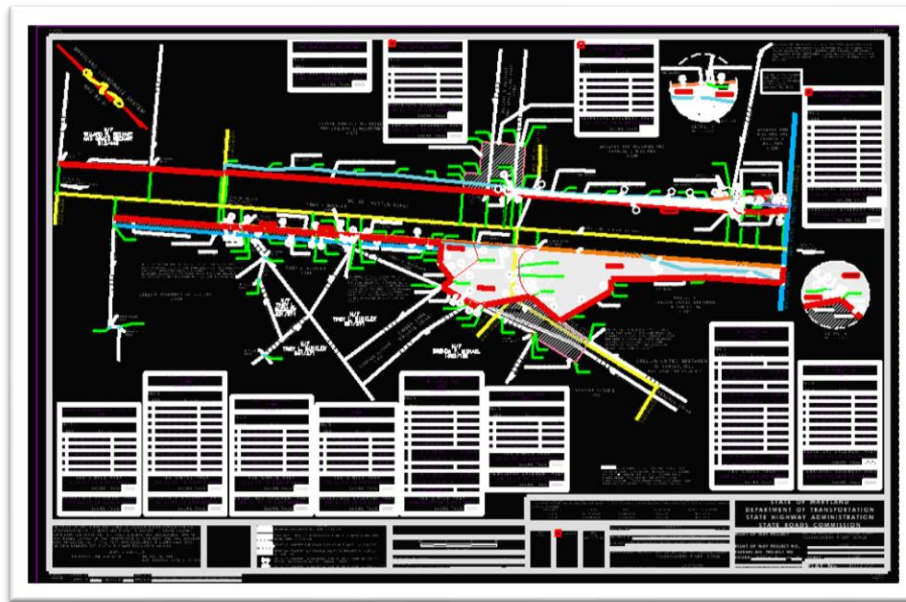


Exhibit 32 - Finished plat for MD 39 at Youghiogheny River Project (CADD version)  
(S:\CADD\PSD\Plats\2014\14-3066)

## Acquisition plats

An acquisition plat (See Exhibit 33) is a plat utilized by the State to acquire land in fee simple, which is used for the construction, maintenance, and operation of a state highway, from a non-SHA entity; to acquire an easement to encumber a privately owned piece of property for the use of the State Roads Commission/State Highway Administration or other another transportation unit; to acquire a right to discharge or drain water from a State-owned property onto a privately owned property; or other rights, as required.

This plat is prepared based on a finalized boundary and right of way workmaps and design plans provided by the Project Manager of the engineered roadway or improvements.

MDOT SHA holds a Preliminary Investigation (PI) prior to the issuance of the acquisition plat at about 60% design completion. MDOT SHA holds the PI to ensure that the State has accounted for all variables. This takes place in the District Office with the District Right of Way Chief, Access Management, OHD Project Manager, District Utilities Engineer, and any other division that has interest in the project's development.

The OHD Division Chief and the District Right of Way Chief should approve any revisions to the plat after issuance.

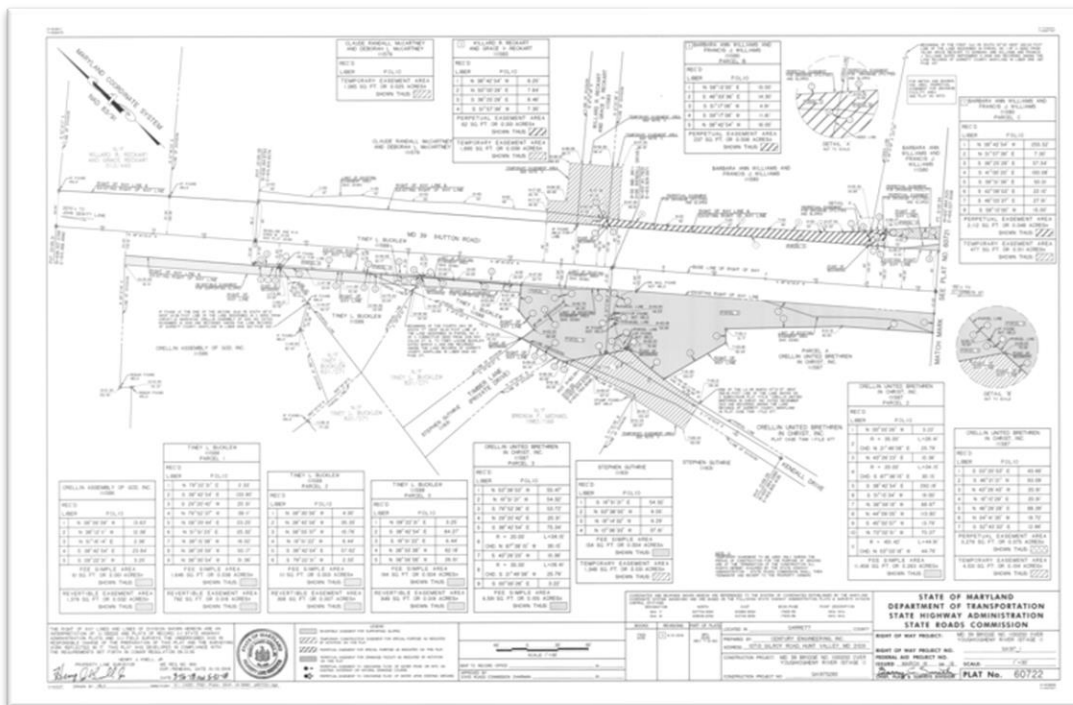


Exhibit 33 – Acquisition plat  
(Appendix A3 contains 11x17 printout.)

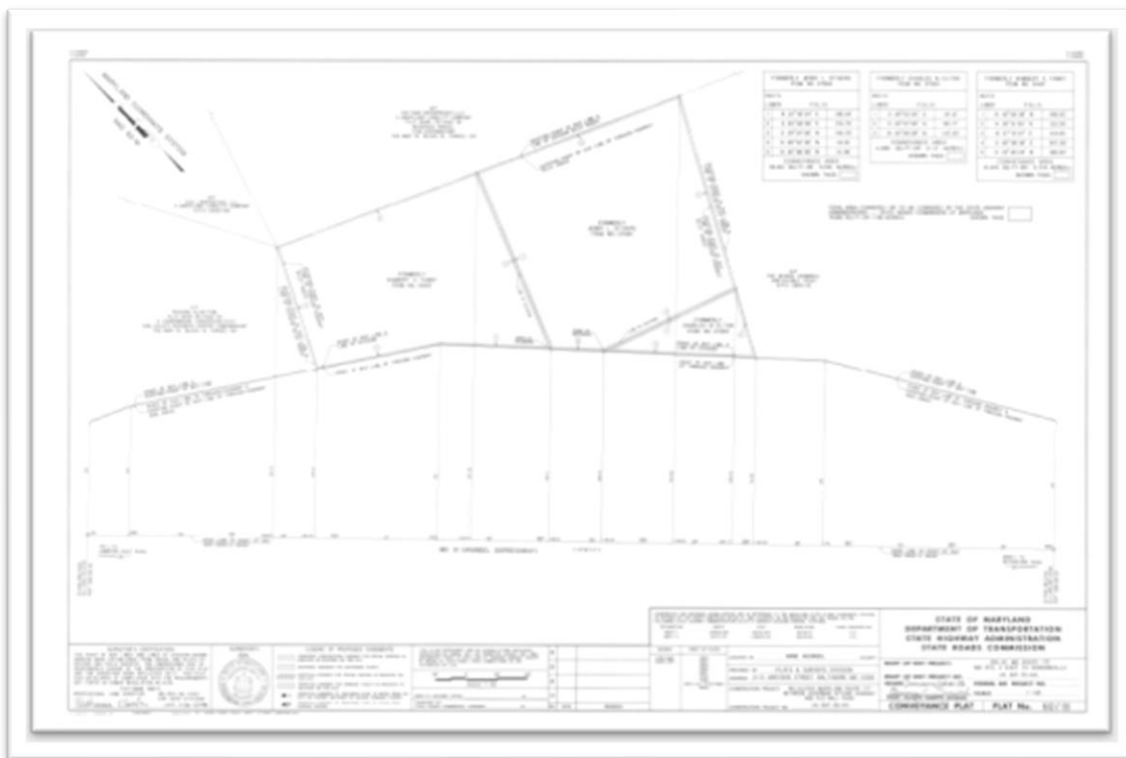
## Item numbers

While item numbers might not be an essential part of the workmap from a surveyor's point of view, it is an essential part needed from the Office of Real Estate (ORE). Once the Project Manager completes and approves the Form 42 (Real Estate Funding report), the Project Manager submits it to ORE. ORE assigns an item number to track the parcel impacted by any interest taken in the land and to represent the land transaction itself. A parcel may have multiple item numbers during its life to identify different land transactions. A plat cannot be issued without an assigned item number.

Once done analyzing impacts, submit an email request to the District Right of Way Chief to provide item numbers for the parcels affected.

## Conveyance plats

A conveyance plat (See Exhibit 34) is a tool used by the State to dispose of extra land determined to be excess land to an adjoining private owner, to a county government or municipality, or for auction at a public sale. The Determination of Excess Land Memorandum (DELM) process determines if a parcel of land is excess land. Requests for these plats come from ORE or The Secretary's Office (TSO). Typically, the State does not need to perform any additional boundary work to prepare these plats. An exception would be if the State is only conveying a portion of the original acquisition.



*Exhibit 34 - Conveyance plat*  
(Appendix A4 contains an 11x17 printout.)



## Road transfer plats

A packet received from ORE should contain:

- MOU – Memorandum of Understanding
- RTA – Road Transfer Agreement
- Aerial with road transfer area delineated
- Road transfer item number
- Any other special instructions

If any of these items are missing, contact the requestor.

Start by pulling all plats referenced in ORE's packet. Confirm that they are all the latest plats covering the transfer area. The plats used for the initial acquisition of the roadway/right of way are also necessary. Next, plot the plats showing the base line, right of way, and existing easements. Verify that the State is also transferring the easements. After that, the surveyor should place the plats on the current coordinate system, if possible. If not, reference the plat datum used (e.g., Plat 12345 Datum) on the north arrow. If the existing plats define and delineate all the area the State would be conveying, a new plat may not be necessary. If a new right of way line showing where the division will be between SHA and the entity receiving the road transfer is necessary, create a new plat.

Identify the following information from the original acquisition:

- Item number
- Grantor(s)
- Liber/Folio
- Deed date or witness date

Cover all the areas the State is transferring.

Create the plat showing the transfer area, the new right of way lines, the lines of division from the original acquisition, the station offsets, and the easements, as necessary.

When creating the transfer area, use the "Extra Land" metes and bounds box through MCPC. This gives the border shading. Edit the bottom to read "Conveyance Area" instead of "Extra Land Area." If the State acquired the area from a single grantor, put the "Formerly" citation in the header. If the State acquired the area from multiple grantors, use the following statement in the header:

### NOW OR FORMERLY STATE OF MARYLAND TO THE USE OF THE STATE HIGHWAY ADMINISTRATION OF THE DEPARTMENT OF TRANSPORTATION

The right of way project name and number in the title box and the construction project name and number are the same as the original acquisition plat. If using multiple contracts, then list them all. If using the plat datum, remove the control box. If using the NAD 27 datum, try to find the control used to list in the control box. List all books and plats used to create the road transfer plat.

In addition to the plat for the road transfer, create an accompanying description. See “Chapter VI – Metes and Bounds Description” for instructions on creating a road transfer description. For an example of a road transfer plat, see Exhibit 35.

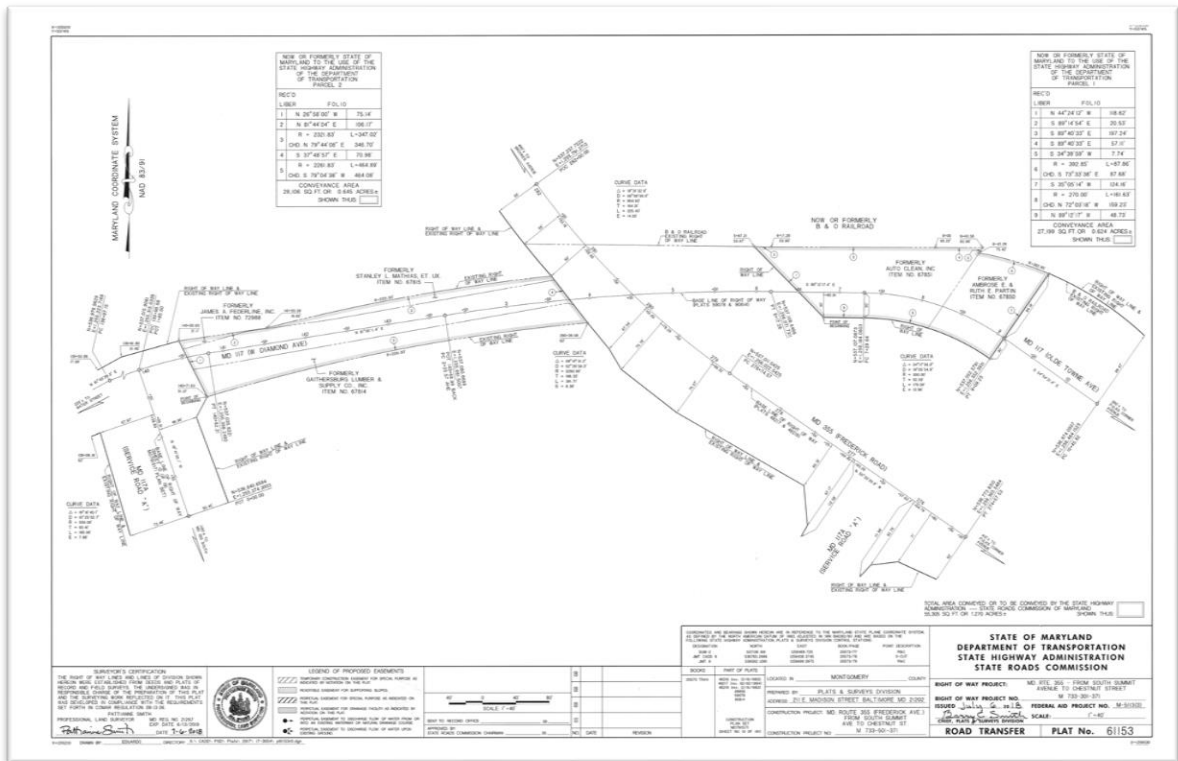


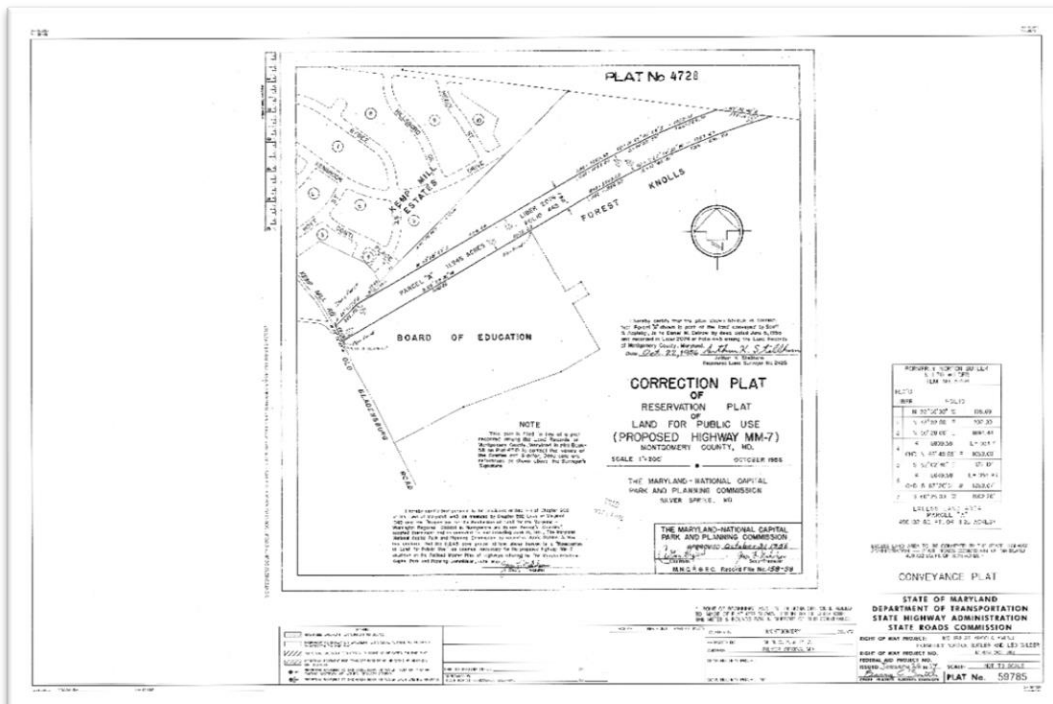
Exhibit 35 – Road transfer plat  
(Appendix A5 contains an 11x17 printout.)

## Donation plats

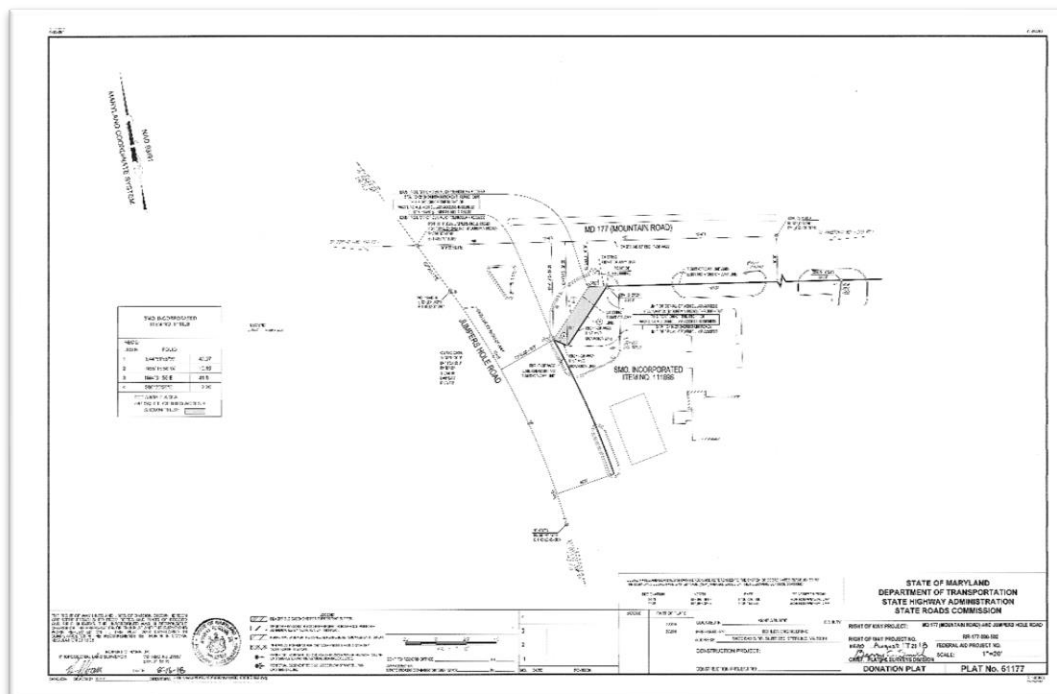
Donation plats help SHA keep track of the right of way and easements it acquires through the donation process. The State often requires a private developer to donate right of way to the State for future road widening, as part of a county's subdivision process. In these cases, the developer hires a consultant surveyor to prepare the plat for the State to reference in the deed conveying the additional right of way. Some of the surveyors who prepare donation plats have little experience with PSD plat standards, so the State reviews the plats to ensure consistency with PSD plat requirements. Appendix I contains the donation plat guidelines checklist. In addition to private developers, consultants create donation plats on behalf of government agencies. There are two types of donation plats: full-size and scanned image.

Scanned image plats (See Exhibit 36) are the simpler alternative. Scanned image plats are subdivision plats recorded by the local county and scanned onto the SHA border. It is critical that PSD reviews the subdivision plat before the county records it. The developer's surveyor will incorporate PSD's comments, typically minor, into the subdivision plat. After the county approves and records the subdivision plat, SHA scans it onto a mylar inside an SHA plat border.

Full-size donation plats (See Exhibit 37) are like other types of SHA plats in that they show fee simple lands and easements acquired through donations. In some cases, the developer's surveyor is using AutoCAD, rather than MicroStation, but the goal is still to create a plat that resembles a standard SHA plat as much as possible.



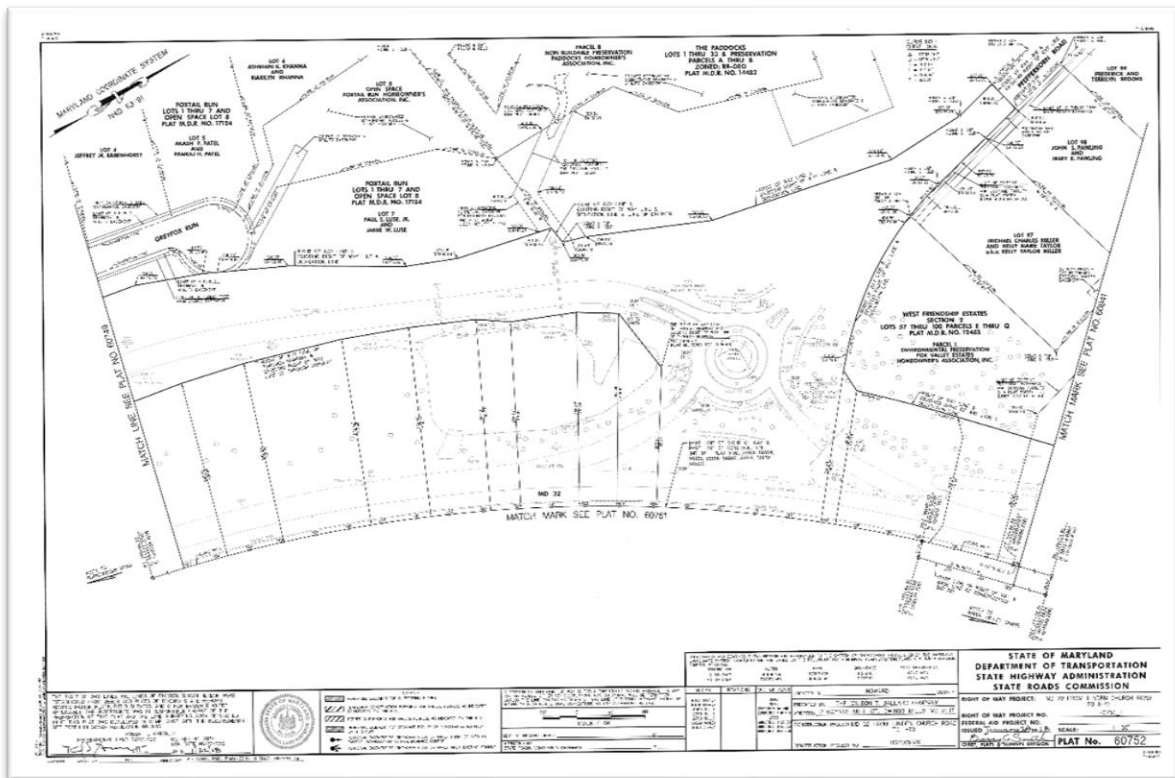
*Exhibit 36 – Scanned image donation plat  
(Both note and metes and bounds box added on the right.)  
(Appendix A6 contains an 11x17 printout.)*



*Exhibit 37 – Full-size donation plat  
(Appendix A7 contains an 11x17 printout.)*

## Definition plats

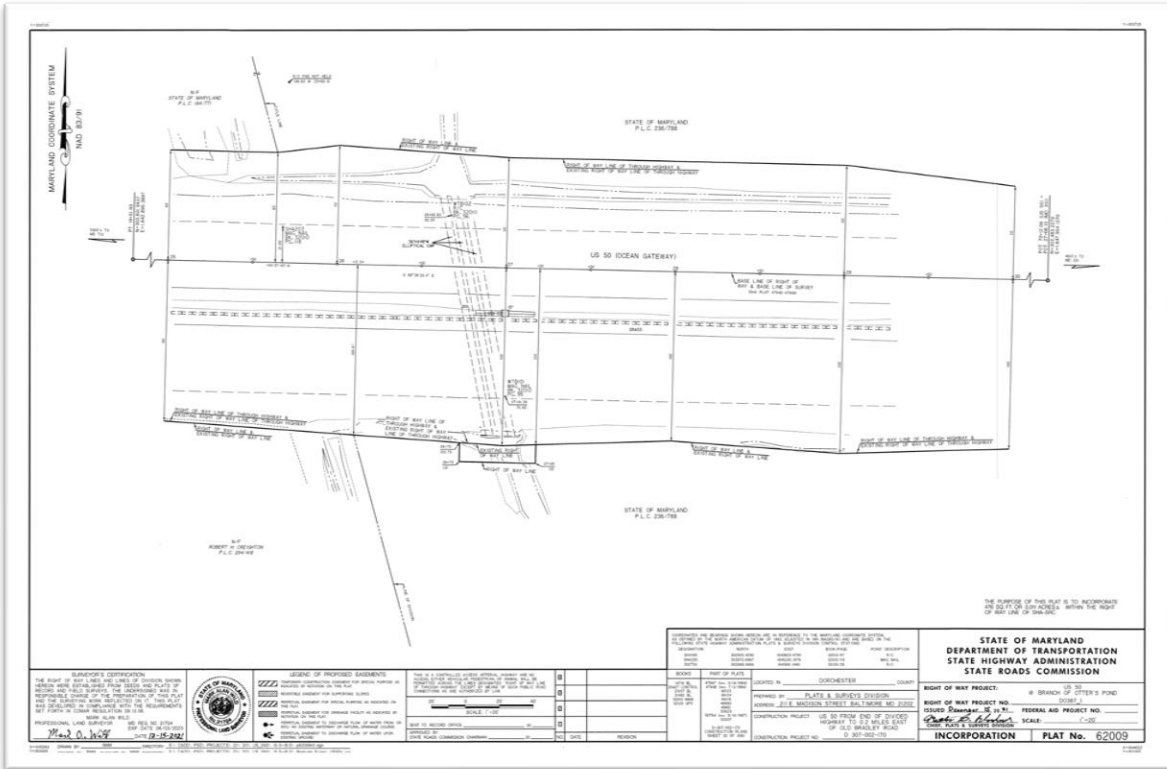
A definition plat (See Exhibit 38) records the present conditions of a site. It shows existing right of way lines, base lines, easements, and property lines. PSD creates a definition plat when the right of way does not appear in a recorded plat or where there is uncertainty in the original acquisition from property owners or in cases of highway use by prescription.



*Exhibit 38 – Definition plat*  
(Appendix A8 contains an 11x17 printout.)

# Incorporation Plat

An incorporation plat (See Exhibit 39) integrates SHA-owned property into the official SHA right of way. PSD uses incorporation plats when a project permanently impacts an SHA-owned property (or a portion of it). This helps SHA if/when it decides to bring a property through the DELM process; the plat would already identify the area to retain. In other words, an incorporation plat is an acquisition plat for an SHA-owned property (though without having to go through the item number process).



*Exhibit 39 – Incorporation plat*  
(Appendix A9 contains an 11x17 printout.)



## Chapter VI – Metes and Bounds Descriptions

### Introduction

A metes and bounds description is an intimate part of a deed necessary to define the interest of land conveyed. The description of the property clearly defines the lines of division and property evidence found, set, or held, so a future surveyor/researcher could retrace them with a high degree of accuracy. Descriptions shall include courses, distances, intersections, bindings, and calls for adjoiners, landmarks, and monumentation. PSD uses descriptions to convey or transfer property that SHA no longer wants to retain in to another government agency, utility, or private entity or individual. Per COMAR 09.13.06.08, the PLS shall sign the metes and bounds description or submit it without a signature as per the requirements of the requesting party. Appendix J contains a checklist for writing metes and bounds descriptions.

There are three distinct types of descriptions used in PSD to convey property. These are the metes and bounds description with plat (See Exhibit 40 and Exhibit 41 for an example to follow), the road transfer with plat (See Exhibit 42 and Exhibit 43 for an example to follow), and the road transfer without plat (formatted similarly to a metes and bounds description). The Word document naming format uses the item number followed (or preceded) by either the right of way project number or road name, and then acquisition/conveyance type, e.g., Item 91112 MD 484 Marbury-Pisgah Road RT (for road transfer) and PG700H51 – Item 106983 Fee Acquisition (for metes and bounds).

There is not a “one size fits all” formula for descriptions, just guidance on format.



**THE GRANTORS DO HEREBY GRANT, CONVEY AND QUITCLAIM** unto the County of Anne Arundel, Maryland, all right, title and interest in and to a part of the roadbed and right of way of MD 3 (Veterans Highway, also known as East Frontage Road), variable width, together with the appurtenances thereto belonging or in anywise appertaining, for 22,282 linear feet or 4.22 miles, more or less. The centerline of which is described as follows:

*Exhibit 40 - Portion of a metes and bounds description  
(Appendix K1 contains the entirety of this page at full-size.)*



*Exhibit 41 - Metes and bounds description (Continued)  
(Appendix K2 contains a full-size version of this page.)*

ROAD SEGMENT  
TO BE CONVEYED BY  
THE STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION  
STATE ROADS COMMISSION OF THE STATE HIGHWAY ADMINISTRATION  
TO  
CITY OF GAITHERSBURG, MARYLAND

Road Transfer Name: MD 117 (W Diamond Avenue), MD 117 (Olde Towne Ave)

Right of Way Project No.: M 733-301-371

Right of Way Project: MD. Rte. 355 - From South Summit Avenue to Chestnut Street

Item No.: 67814, 67815, 67850, 67851, 72988

Road Transfer Item No.: 104326

Total Fee Area: 55,305 square feet or 1.270 acres, more or less

.....

THE GRANTORS DO HEREBY GRANT, CONVEY AND QUITCLAIM unto City of Gaithersburg, Maryland, all right, title and interest in and to the roadbed and right of way of MD 117 (W Diamond Avenue) and MD 117 (Olde Towne Ave), together with the appurtenances thereto belonging or in anywise appertaining.

BEING all those pieces or parcels of land as shown and delineated on the State of Maryland, Department of Transportation, State Highway Administration, State Roads Commission Plat No. 61153, which has been filed for record with and electronically recorded by the Maryland State Archives.

TOGETHER WITH the appurtenances thereto belonging or in anywise appertaining and any road dedication areas of record.

*Exhibit 42 - Road transfer description referencing a road transfer plat  
(Appendix K3 contains a full-size version of this page.)*

conveyed by James A. Federline, Inc. to the State of Maryland to the use of the State Roads Commission of Maryland.



*Exhibit 43 - Road transfer description (Continued)  
(Appendix K4 contains a full-size version of this page.)*

## Parts of a metes and bounds description

- Header
  - Introduces the project and parcel
  - Typically includes right of way project number, right of way project name, item number, acquisition/conveyance area, and datum
  - Also has road name and road transfer item number for road transfer description
  - May not have an item number if SHA is releasing a prescriptive easement over an abandoned roadway
  - Is adjustable to suit the need, area the State is acquiring, easement area, etc.
- Caption
  - The first part of the metes and bounds description
  - States the property's general location to focus attention there
  - Example: All that portion of Lot 12, Block 15 according to Map No. 12 recorded in the office of the County Clerk of Somerset County, Maryland, more particularly described as follows...
- Body
  - Identifies a parcel located within the location described by the caption
  - Must clearly define the deed's goal
  - Specifies courses, consisting of a bearing and distance, between property corners
  - Courses must close mathematically
  - Measured in both acres and square feet
  - References previous deed of acquisition
- Qualifying clause
  - States encumbrances/restrictions in the land given by either the body or the caption
  - References relevant deed(s)
  - Example: Excepting there from the easterly 100.00 feet
- Augmenting clause
  - Gives a right of usage outside the conveyed, usually easements
  - References relevant deed(s)
  - Example: And granting an easement for road purposes over the westerly 25 feet of the above excepted 100 feet



## Chapter VII – Peer Review

### Introduction

A co-worker or supervisor must review mosaics, workmaps, plats, and descriptions. It is necessary to perform quality assurance and quality compliance (QA/QC) on deliverables before submitting to ensure PSD is delivering the highest quality product possible.

### Mosaic

A mosaic is the visual representation of the research done, as explained in “Chapter II – Mosaics” and the first level of deliverable. This document is based on descriptions prepared at various times by different surveyors or attorneys, so the “puzzle” might not have a perfect fit.

When reviewing a mosaic, essential information the surveyor should include is:

- Bar scale
- Base line of right of way
- Calls
  - Adjoiners
    - Name
    - Roadway
    - Stream or water feature
  - Property corner monumentation
    - Pipes
    - Rebars
    - Stones
  - Other natural or artificial features
- Easements
- North arrow
- Parcels
  - Error of closure
  - Owner's name
  - Property mosaic

- If the surveyor used parcel lines to set the right of way on a right of way mosaic
- Preparer and date
- Recording references for all documents
  - Liber and folio
  - Plat title, book, and page number
  - Survey field book
- Right of way

## Workmap

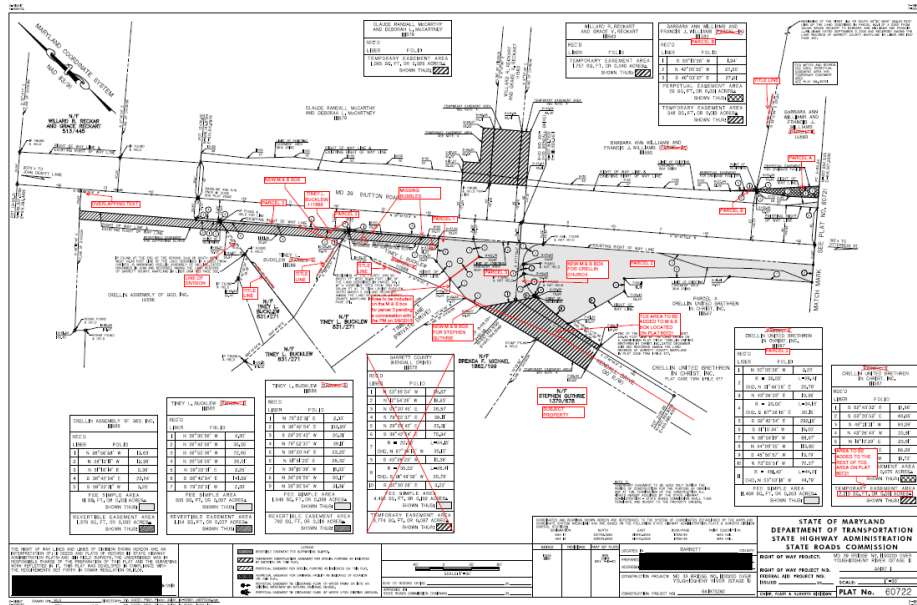
A workmap combines the mosaic prepared in the office with the monumentation found during meets and bounds field work. The surveyor decides, based on both research and field-located evidence, where boundary lines, base lines, and right of way lines should be located. See “Chapter IV – Workmaps” for more details and examples. When reviewing work done by another surveyor, either in-house or by a consultant, there is some vital information to be aware of. Information that the surveyor should check includes:

- Bar scale
- Drafting requirements
  - Line type
  - Line weight
- Monuments found on a metes and bounds survey and used to set any base line or boundary
- North arrow with datum identified
  - NAD 83/91, as of July 2022
  - Other assignments may be on a different datum on a task-specific basis.
- Parcel identified with current property owner
  - Follow guidelines on what information to include on each parcel.
- Recorded angles and distances vs field angles and distances
- Roads identified with both route number and name
- Surveyor’s report
- Title block

When reviewing a workmap, utilize the workmap checklist found in Appendix L.

## Plat

When reviewing a plat, there are many details to consider, and for that reason, PSD has created a drafter's checklist for the surveyor to use when preparing and reviewing a plat. Appendix H contains a copy of the latest drafter's checklist. When the surveyor finalizes the plat and is ready for the Assistant Division Chief to do a final review, the surveyor must hand in the checklist along with the finalized plat. Exhibit 44 shows an example of a marked-up plat.



*Exhibit 44 – Example of plat with comments  
(Appendix A10 contains an 11x17 printout.)*

## Appendix

<b>11x17 Plats and Plans.....</b>	<b>A.....</b>	<b>65</b>
<i>Design plan title sheet (Exhibit 1) .....</i>	<i>A1 .....</i>	<i>65</i>
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<i>Acquisition plat (Exhibit 33) .....</i>	<i>A3 .....</i>	<i>67</i>
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<i>Road transfer plat (Exhibit 35).....</i>	<i>A5 .....</i>	<i>69</i>
<i>Scanned image plat (Exhibit 36) .....</i>	<i>A6 .....</i>	<i>70</i>
<i>Full-size donation plat (Exhibit 37) .....</i>	<i>A7 .....</i>	<i>71</i>
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<i>Incorporation plat (Exhibit 39) .....</i>	<i>A9 .....</i>	<i>73</i>
<i>Plat with comments (Exhibit 44).....</i>	<i>A10 .....</i>	<i>74</i>
<b>Deed Example (Exhibit 3) .....</b>	<b>B.....</b>	<b>75</b>
<b>County Plat .....</b>	<b>C.....</b>	<b>76</b>
<b>Field/Survey Book Page (Exhibit 9).....</b>	<b>D.....</b>	<b>77</b>
<b>Types of Easements Used by SHA.....</b>	<b>E.....</b>	<b>78</b>
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<i>Metes and Bounds Description (Last Page) (Exhibit 41) .</i>	<i>K2 .....</i>	<i>104</i>
<i>Road Transfer Description (Exhibit 42) .....</i>	<i>K3 .....</i>	<i>105</i>
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5. PLAN - STA. 110+00 TO STA. 116+00
6. PLAN - STA. 116+00 TO STA. 122+00
7. PLAN - STA. 122+00 TO STA. 128+00
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57. AND 58. - QUANTITIES
59. AND 60. - SUMMARY OF QUANTITIES

## PAVING LEGEND

- NEW CONSTRUCTION
- REMOVE EXISTING PAVEMENT AND RECONSTRUCT
- RESURFACE

RIGHT OF WAY LINE SHOWN ON THESE PLANS DO NOT INCLUDE EASEMENTS  
THEY ARE FOR ASSISTANCE IN INTERPRETING THE PLANS THESE LINES DO  
NOT REPRESENT THE OFFICIAL PROPERTY ACQUISITION LINES FOR  
OFFICIAL FEE, RIGHT OF WAY AND EASEMENT INFORMATION, SEE  
APPROPRIATE RIGHT OF WAY PLATS.

## CONVENTIONAL SIGNS

STATE AND NATIONAL LINE	-----	CULVERTS	=====
COUNTY LINE	-----	RETAINING WALL	=====
CITY OR VILLAGE	-----	DROP INLET	=====
GUARD RAIL	-----	TROLLEY POLE	-----
UNFENCED PROPERTY	-----	POWER POLE	-----
RIGHT OF WAY LINE	-----	TELEPHONE OR TELEGRAPH POLE	-----
TRAVELED WAY	-----	MARSH	-----
RAILROADS	-----	HEDGE	-----
BASE OR SURVEY LINE	-----	GROUND ELEVATION	DATUM LINE
		GRADE ELEVATION	DATUM LINE



Maryland Department of Transportation

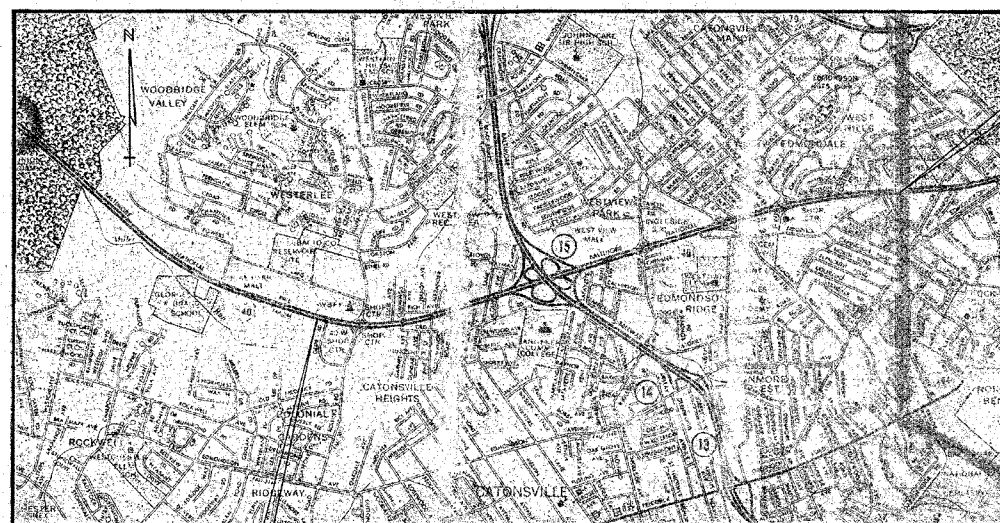
STATE HIGHWAY ADMINISTRATION

PLANS OF PROPOSED HIGHWAY

U.S. ROUTE 40 (WEST)

BALTIMORE CITY LINE TO WEST OF ROLLING RD.

CONTRACT NO. B 694-501-477



SCALE: 1"= 2000'  
LENGTH OF PROJECT - 2.49 MILES

LIMIT OF WORK UNDER  
CONTRACT: B 694-501-477  
STA. 234+50

LIMIT OF WORK UNDER  
CONTRACT: B 694-501-477  
STA. 103+19

## SOILS LEGEND

- A-3, SAND, NON-PLASTIC
- A-2, SANDS AND FINES
- A-2-4, SILTY SAND
- A-2-7, CLAYEY SAND
- A-4, SILT
- A-4-2, SANDY SILT
- A-4-7, CLAYEY SILT
- A-5, SILT
- A-7, CLAY
- A-7-2, SANDY CLAY
- A-7-4, SILTY CLAY
- GENERAL LOCATION OF REQUIRED MATERIAL REMOVAL



PLAN LOCATION OF SOIL BORINGS

## BORING TARGET AND PROFILES

SCALE: VERTICAL - 1"=10'  
HORIZONTAL - NONE

L.L.-LIQUID LIMIT, N.P.-NON-PLASTIC, O.M.C.-OPTIMUM MOISTURE CONTENT,  
P.I.-PLASTIC INDEX, M.D.D.-MAXIMUM DRY DENSITY, P.C.F.-POUNDS PER CUBIC FOOT,  
M.D.D. & O.M.C.-PER A.A.S.H.T.O. DESIGNATION T-180 METHOD 'C'

UNLESS OTHERWISE NOTED ON PLANS, ALL SOIL SURVEY BORINGS FOR  
ROADWAY CONSTRUCTION WERE LEFT OPEN FOR 24 HOURS WITH NO EXCESS  
MOISTURE OR FREE WATER ENCOUNTERED DURING TIME OF SOIL SURVEY.  
(8-78, 10-78)

## SURVEY BOOKS

- 19355 - "X" SECTIONS & PROFILE
- 19358 - TRAVERSE SET-UP & HAND REF.
- 19563 - TOPO & OFFSET LINES
- 19564 - TOPO
- 19565 - TOPO
- 19566 - TOPO
- 19567 - TOPO
- 19568 - TOPO
- 19569 - "X" SECTIONS
- 19570 - "X" SECTIONS
- 19900 - PREL. "X" SECTIONS

THE DESIGN OF THIS PROJECT HAS INCORPORATED FACILITIES FOR THE ELDERLY AND  
HANDICAPPED IN COMPLIANCE WITH STATE AND FEDERAL LEGISLATION.

SEDIMENT AND EROSION CONTROLS WILL BE STRICTLY ENFORCED

## - DESIGN TRAFFIC DATA - 1980

DESCRIPTION	1980	2002	1980	2002
BALTO. CITY LINE TO BALTO. BELTWAY	39,000	47,000	BALTO. BELTWAY TO WEST OF ROLLING ROAD	52,000
A. D. T.	39,000	47,000		
D. H. V.	9%	9%		7%
DIRECTIONAL DISTRIBUTION D. H. V.	60%	60%		57%
PERCENT TRUCKS - A. D. T.	3%	3%		4%
PERCENT TRUCKS - D. H. V.	2%	2%		2%
DESIGN SPEED - 45 MPH				

## REVIEWED AND APPROVAL RECOMMENDED

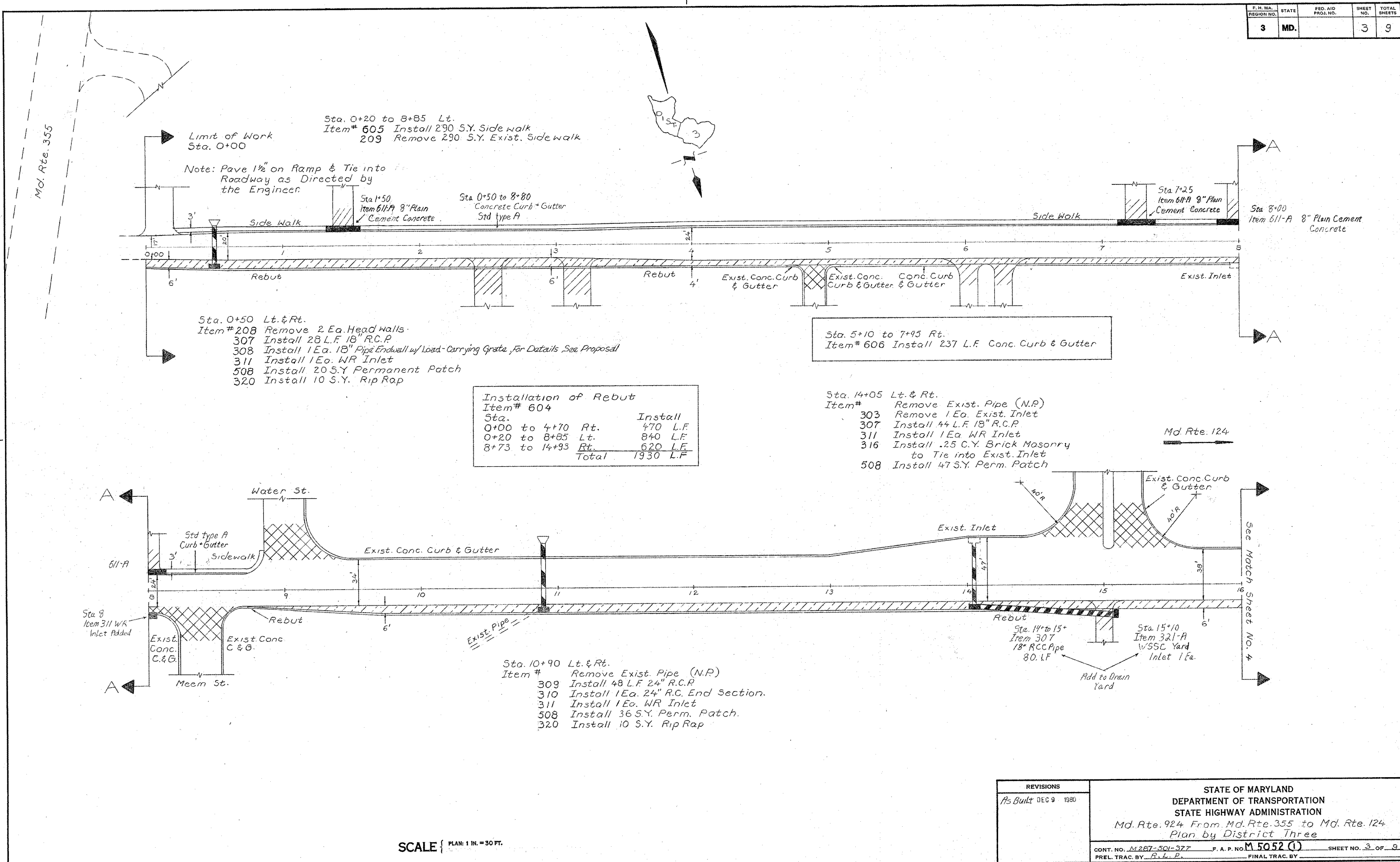
Reviewed and Approved  
CHIEF, BUREAU OF HIGHWAY DESIGN

## APPROVAL RECOMMENDED

Approved  
ASSISTANT CHIEF ENGINEER - HIGHWAY DEVELOPMENT

## APPROVED

Approved  
CHIEF ENGINEER



Installation of Rebut  
Item# 604

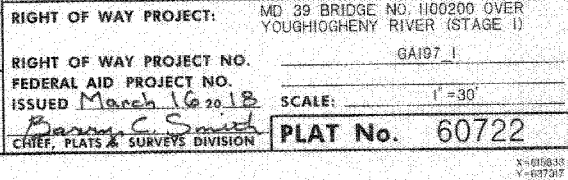
Sta.		Install
0+00 to 4+70	Rt.	470 L.F.
0+20 to 8+85	Lt.	840 L.F.
8+73 to 14+93	Rt.	620 L.F.
<b>Total</b>		<b>1930 L.F.</b>

Sta. 5+10 to 7+95 Rt.  
Item# 606 Install 237 L.F. Conc. Curb & Gutter

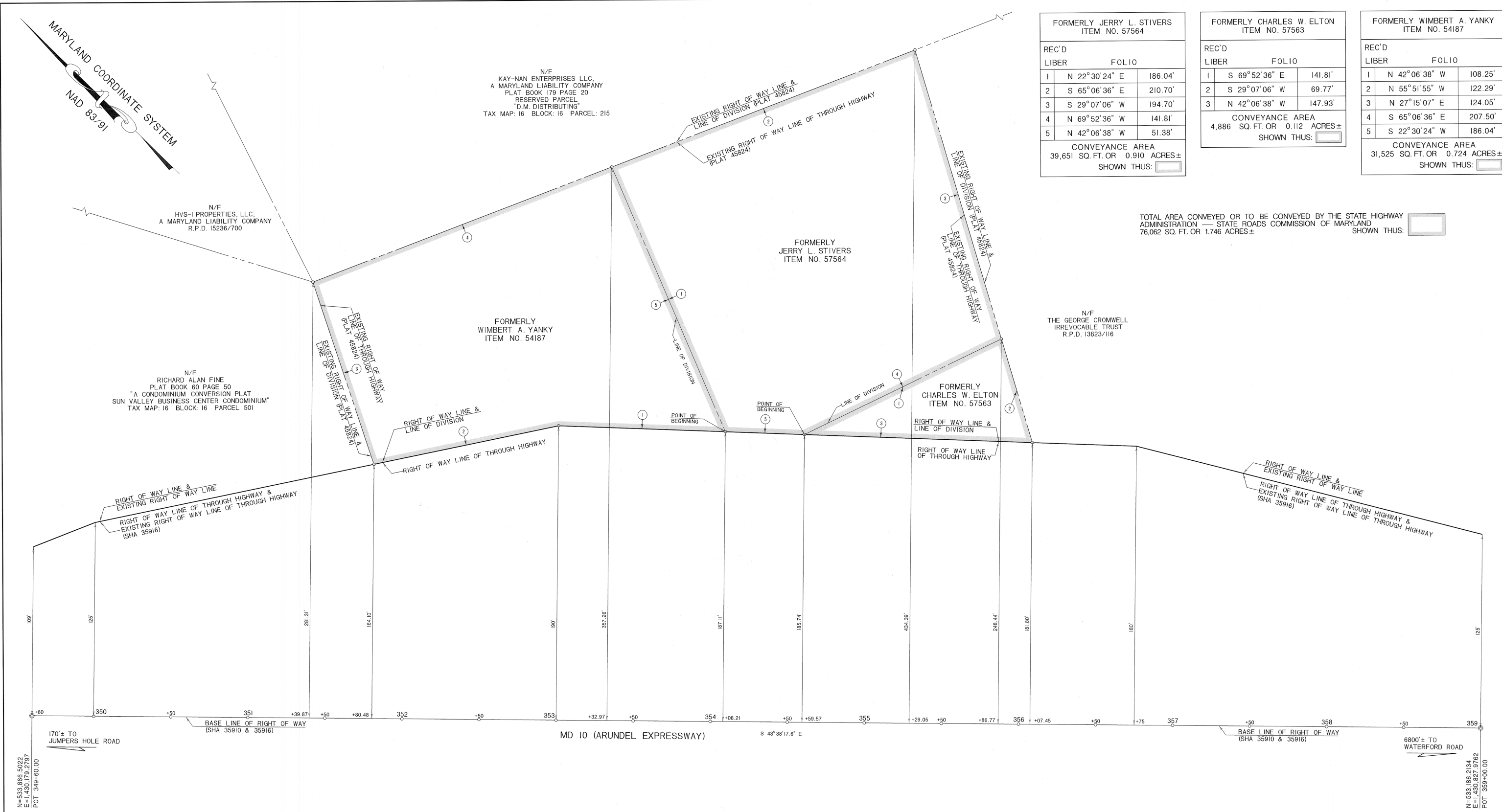
Sta. 14+05 Lt. & Rt.  
Item# 303 Remove Exist. Pipe (N.P.)  
307 Remove 1 Ea. Exist. Inlet  
307 Install 44 L.F. 18" R.C.P.  
311 Install 1 Ea. WR Inlet  
316 Install .25 C.Y. Brick Masonry to Tie into Exist. Inlet  
508 Install 47 S.Y. Perm. Patch

Sta. 10+90 Lt. & Rt.  
Item# 309 Remove Exist. Pipe (N.P.)  
309 Install 48 L.F. 24" R.C.P.  
310 Install 1 Ea. 24" R.C. End Section.  
311 Install 1 Ea. WR Inlet  
508 Install 36 S.Y. Perm. Patch.  
320 Install 10 S.Y. Rip Rap

<b>REVISIONS</b> As Built DEC 9 1980		STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION Md. Rte. 924 From Md. Rte. 355 to Md. Rte. 124 Plan by District Three	
CONT. NO. M287-501-377 PREL. TRAC. BY R.L.P.		F.A.P. NO. M 5052 (1) FINAL TRAC. BY	
		SHEET NO. 3 OF 9	







FORMERLY JERRY L. STIVERS ITEM NO. 57564		
REC'D	FOLIO	
LIBER		
1	N 22°30'24" E	186.04'
2	S 65°06'36" E	210.70'
3	S 29°07'06" W	194.70'
4	N 69°52'36" W	141.81'
5	N 42°06'38" W	51.38'
CONVEYANCE AREA 39,651 SQ. FT. OR 0.910 ACRES± SHOWN THUS: <span style="border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span>		

FORMERLY CHARLES W. ELTON ITEM NO. 57563		
REC'D	FOLIO	
LIBER		
1	S 69°52'36" E	141.81'
2	S 29°07'06" W	69.77'
3	N 42°06'38" W	147.93'
CONVEYANCE AREA 4,886 SQ. FT. OR 0.112 ACRES± SHOWN THUS: <span style="border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span>		

FORMERLY WIMBERT A. YANKY ITEM NO. 54187		
REC'D	FOLIO	
LIBER		
1	N 42°06'38" W	108.25'
2	N 55°51'55" W	122.29'
3	N 27°15'07" E	124.05'
4	S 65°06'36" E	207.50'
5	S 22°30'24" W	186.04'
CONVEYANCE AREA 31,525 SQ. FT. OR 0.724 ACRES± SHOWN THUS: <span style="border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span>		

TOTAL AREA CONVEYED OR TO BE CONVEYED BY THE STATE HIGHWAY  
ADMINISTRATION — STATE ROADS COMMISSION OF MARYLAND  
76,062 SQ. FT. OR 1.746 ACRES±  
SHOWN THUS:

**SURVEYOR'S CERTIFICATION**

THE RIGHT OF WAY LINES AND LINES OF DIVISION SHOWN HEREON WERE ESTABLISHED FROM DEEDS AND PLATS OF RECORD AND FIELD SURVEYS. THE UNDERSIGNED WAS IN RESPONSIBLE CHARGE OF THE PREPARATION OF THIS PLAT AND THE SURVEYING WORK REFLECTED ON IT. THIS PLAT WAS DEVELOPED IN COMPLIANCE WITH THE REQUIREMENTS SET FORTH IN COMAR REGULATION 09.13.06.

PATTIANNE SMITH  
PROFESSIONAL LAND SURVEYOR  
MD REG. NO. 21267  
EXP. DATE 6/13/2019  
DATE 1-26-2018

**SURVEYOR'S SEAL**

**LEGEND OF PROPOSED EASEMENTS**

- TEMPORARY CONSTRUCTION EASEMENT FOR SPECIAL PURPOSE AS INDICATED BY NOTATION ON THIS PLAT.
- REVERTIBLE EASEMENT FOR SUPPORTING SLOPES.
- PERPETUAL EASEMENT FOR SPECIAL PURPOSE AS INDICATED ON THIS PLAT.
- PERPETUAL EASEMENT FOR DRAINAGE FACILITY AS INDICATED BY NOTATION ON THIS PLAT.
- PERPETUAL EASEMENT TO DISCHARGE FLOW OF WATER FROM OR INTO AN EXISTING WATERWAY OR NATURAL DRAINAGE COURSE.
- PERPETUAL EASEMENT TO DISCHARGE FLOW OF WATER UPON EXISTING GROUND.

THIS IS AN EXPRESSWAY AND NO ACCESS, EITHER VEHICULAR, PEDESTRIAN, OR ANIMAL WILL BE PERMITTED ACROSS THE LINES DESIGNATED "RIGHT OF WAY LINE OF THROUGH HIGHWAY" EXCEPT BY MEANS OF SUCH PUBLIC ROAD CONNECTIONS AS ARE AUTHORIZED BY LAW.

30' 0 30' 60'  
SCALE: 1"=30'

SENT TO RECORD OFFICE 20

APPROVED BY: STATE ROADS COMMISSION CHAIRMAN 20

NO. DATE REVISION

DESIGNATION	NORTH	EAST	BOOK/PAGE	POINT DESCRIPTION
MD177-1	534459.656	1431142.672	25570/97	R/C
MD177-2	534717.411	1430267.521	25570/98	R/C

BOOKS	PART OF PLATS
21380 M&B 25570 GPS	35910 35914 35915 35916 35917 37183 37816 38176 (rev. 10/22/1968) 45824

LOCATED IN ANNE ARUNDEL COUNTY

PREPARED BY: PLATS & SURVEYS DIVISION

ADDRESS: 211 E. MADISON STREET BALTIMORE MD 21202

CONSTRUCTION PROJECT: RELOCATED MARYLAND ROUTE 177 BETWEEN GOVERNOR RITCHIE HIGHWAY AND OLD MILL ROAD

CONSTRUCTION PROJECT NO: AA-507-30-541

**STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
STATE ROADS COMMISSION**

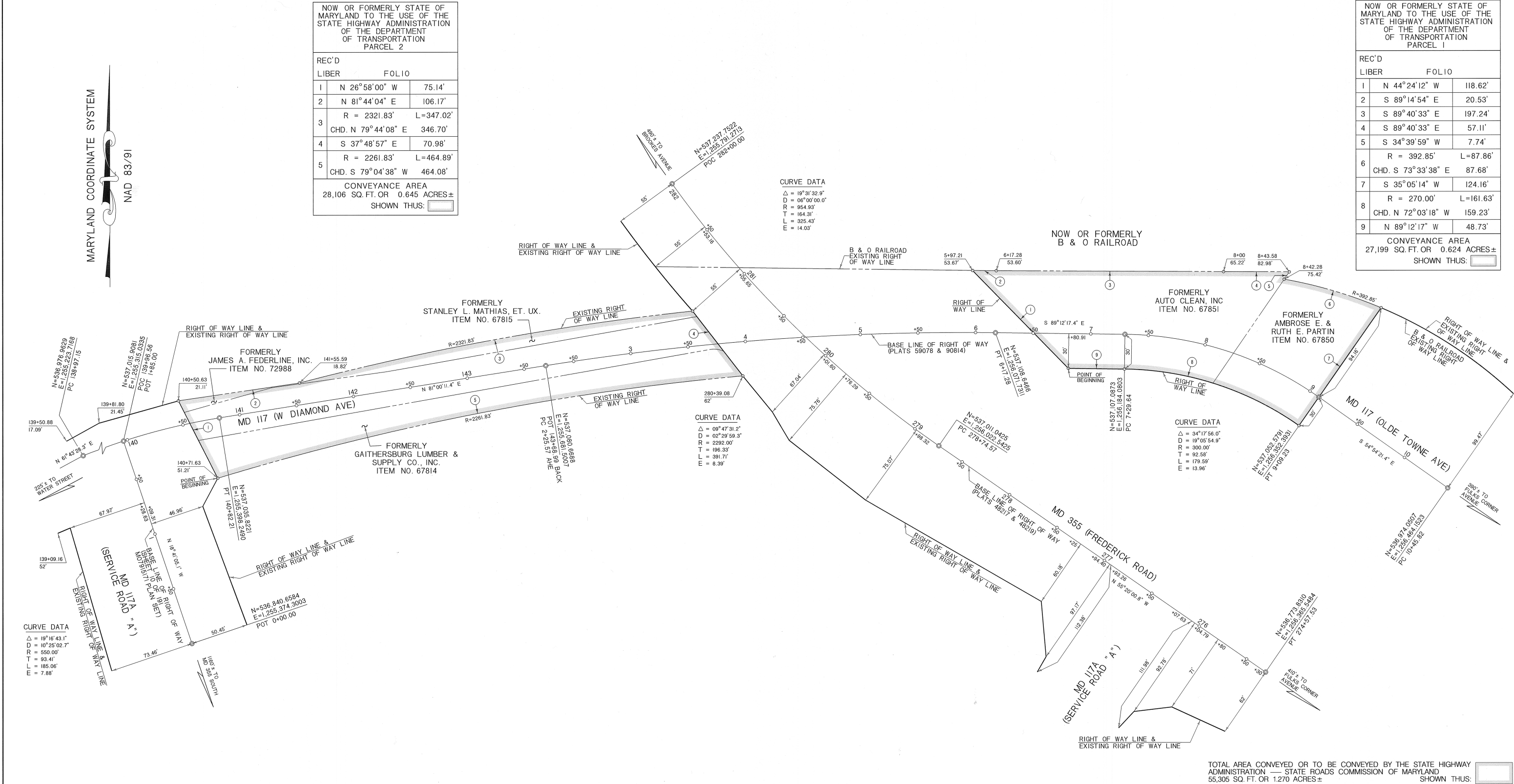
**RIGHT OF WAY PROJECT:** RELOC. MD. ROUTE 177 MD. RTE. 2 EAST TO SHARONVILLE

**RIGHT OF WAY PROJECT NO.** AA 507-23-541

**ISSUED** January 26, 2018 **FEDERAL AID PROJECT NO.**

**CHIEF, PLATS & SURVEYS DIVISION** SCALE: 1"=30'

**CONVEYANCE PLAT** **PLAT No. 60718**



NOW OR FORMERLY STATE OF MARYLAND TO THE USE OF THE STATE HIGHWAY ADMINISTRATION OF THE DEPARTMENT OF TRANSPORTATION PARCEL 2		
REC'D LIBER FOLIO		
1	N 26°58'00" W	75.14'
2	N 81°44'04" E	106.17'
3	R = 2321.83' L=347.02'	
4	CHD. N 79°44'08" E	346.70'
5	S 37°48'57" E	70.98'
	R = 2261.83' L=464.89'	
	CHD. S 79°04'38" W	464.08'
CONVEYANCE AREA 28,106 SQ. FT. OR 0.645 ACRES± SHOWN THUS:		

NOW OR FORMERLY STATE OF MARYLAND TO THE USE OF THE STATE HIGHWAY ADMINISTRATION OF THE DEPARTMENT OF TRANSPORTATION PARCEL 1		
REC'D LIBER FOLIO		
1	N 44°24'12" W	118.62'
2	S 89°14'54" E	20.53'
3	S 89°40'33" E	197.24'
4	S 89°40'33" E	57.11'
5	S 34°39'59" W	7.74'
6	R = 392.85' L=87.86'	
	CHD. S 73°33'38" E	87.68'
7	S 35°05'14" W	124.16'
8	R = 270.00' L=161.63'	
	CHD. N 72°03'18" W	159.23'
9	N 89°12'17" W	48.73'
CONVEYANCE AREA 27,199 SQ. FT. OR 0.624 ACRES± SHOWN THUS:		

SURVEYOR'S CERTIFICATION  
THE RIGHT OF WAY LINES AND LINES OF DIVISION SHOWN HEREON WERE ESTABLISHED FROM DEEDS AND PLATS OF RECORD AND FIELD SURVEYS. THE UNDERSIGNED WAS IN RESPONSIBLE CHARGE OF THE PREPARATION OF THIS PLAT AND THE SURVEYING WORK REFLECTED ON IT. THIS PLAT WAS DEVELOPED IN COMPLIANCE WITH THE REQUIREMENTS SET FORTH IN COMAR REGULATION 09.13.06.  
PATTIANNE SMITH  
PROFESSIONAL LAND SURVEYOR MD REG. NO. 21267  
EXP. DATE 6/13/2019  
DATE 7-6-2018

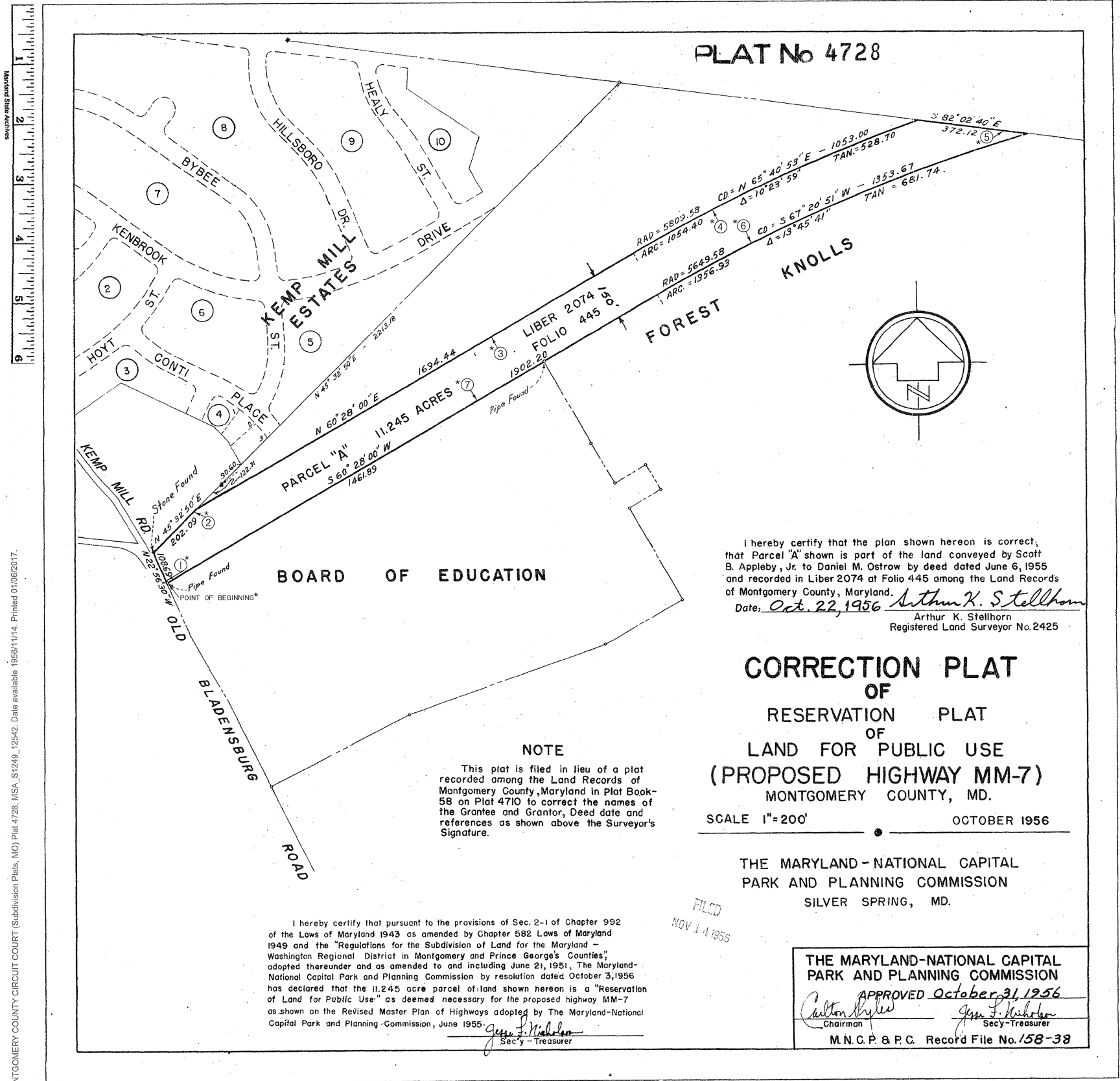


LEGEND OF PROPOSED EASEMENTS	
	TEMPORARY CONSTRUCTION EASEMENT FOR SPECIAL PURPOSE AS INDICATED BY NOTATION ON THIS PLAT.
	REVERTIBLE EASEMENT FOR SUPPORTING SLOPES.
	PERPETUAL EASEMENT FOR SPECIAL PURPOSE AS INDICATED ON THIS PLAT.
	PERPETUAL EASEMENT FOR DRAINAGE FACILITY AS INDICATED BY NOTATION ON THIS PLAT.
	PERPETUAL EASEMENT TO DISCHARGE FLOW OF WATER FROM OR INTO AN EXISTING WATERWAY OR NATURAL DRAINAGE COURSE.
	PERPETUAL EASEMENT TO DISCHARGE FLOW OF WATER UPON EXISTING GROUND.

40' 0 40' 80'	
SCALE: 1" = 40'	
SENT TO RECORD OFFICE	20
APPROVED BY: STATE ROADS COMMISSION CHAIRMAN	20
NO.	DATE
REVISION	

COORDINATES AND BEARINGS SHOWN HEREON ARE IN REFERENCE TO THE MARYLAND STATE PLANE COORDINATE SYSTEM, AS DEFINED BY THE NORTH AMERICAN DATUM OF 1983, ADJUSTED IN 1991 (NAD83/91) AND ARE BASED ON THE FOLLOWING STATE HIGHWAY ADMINISTRATION, PLATS & SURVEYS DIVISION CONTROL STATIONS:			
DESIGNATION	NORTH	EAST	BOOK/PAGE
SUM-2	537136.169	1256469.725	20573/77
JMT CADD 9	536783.2986	1256438.3745	20573/78
JMT 8	536582.1290	1256699.5975	20573/79
POINT DESCRIPTION		X-CUT	
		R&C	
BOOKS	PART OF PLATS	LOCATED IN MONTGOMERY COUNTY	
20573 TRAV	48216 (rev. 12/16/1983) 48217 (rev. 02/02/1984) 48219 (rev. 12/16/1983)	PREPARED BY: PLATS & SURVEYS DIVISION	
		ADDRESS: 211 E. MADISON STREET BALTIMORE MD 21202	
		CONSTRUCTION PROJECT: MD. ROUTE 355 (FREDERICK AVE.) FROM SOUTH SUMMIT AVE TO CHESTNUT ST.	
		CONSTRUCTION PROJECT NO.: M 733-501-371	

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION STATE ROADS COMMISSION	
RIGHT OF WAY PROJECT: MD. RTE. 355 - FROM SOUTH SUMMIT AVENUE TO CHESTNUT STREET	
RIGHT OF WAY PROJECT NO. M 733-301-371	
ISSUED July 6 2018 FEDERAL AID PROJECT NO. M-5113(3)	
SCALE: 1" = 40'	
ROAD TRANSFER	
PLAT No. 61153	



FORMERLY NORTON BUTLER & LEO WILDER ITEM NO. 51404		
REC'D		
LIBER	FOLIO	
1	N 22° 56' 30" W	108.69'
2	N 45° 32' 50" E	202.09'
3	N 60° 28' 00" E	1694.44'
4	R = 5809.58'	L=1054.4'
	CHD. N 65° 40' 53" E	1053.00'
5	S 82° 02' 40" E	372.12'
6	R = 5649.58'	L=1356.93'
	CHD. S 67° 20' 51" W	1353.67'
7	S 60° 28' 00" W	1902.20'
EXCESS LAND AREA PARCEL "A" 490,132 SQ. FT. OR 11.25 ACRES±		

EXCESS LAND AREA TO BE CONVEYED BY THE STATE HIGHWAY ADMINISTRATION — STATE ROADS COMMISSION OF MARYLAND  
490,132 SQ. FT. OR 11.25 ACRES ±

CONVEYANCE PLAT

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
STATE ROADS COMMISSION

**RIGHT OF WAY PROJECT:** MD 193 AT ARCOLA AVENUE  
FORMERLY NORTON BUTLER AND LEO WILDER  
M-644-002-363

**RIGHT OF WAY PROJECT NO.**

**FEDERAL AID PROJECT NO.**

**ISSUED January 26 2017**

**Barry C. Smith**  
CHIEF, PLATS & SURVEYS DIVISION

**SCALE:** NOT TO SCALE

**PLAT No. 59785**


LEGEND	
	REVERTIBLE EASEMENT FOR SUPPORTING SLOPES.
	TEMPORARY CONSTRUCTION EASEMENT FOR SPECIAL PURPOSE AS INDICATED BY NOTATION ON THIS PLAT.
	PERPETUAL EASEMENT FOR SPECIAL PURPOSE AS INDICATED ON THIS PLAT.
	PERPETUAL EASEMENT FOR DRAINAGE FACILITY AS INDICATED BY NOTATION ON THIS PLAT.
	PERPETUAL EASEMENT TO DISCHARGE FLOW OF WATER FROM OR INTO AN EXISTING WATERWAY OR NATURAL DRAINAGE COURSE.
	PERPETUAL EASEMENT TO DISCHARGE FLOW OF WATER UPON EXISTING GROUND.

BOOKS	REVISIONS	PART OF PLATS
SENT TO RECORD OFFICE 20		
APPROVED BY: STATE ROADS COMMISSION CHAIRMAN 20		

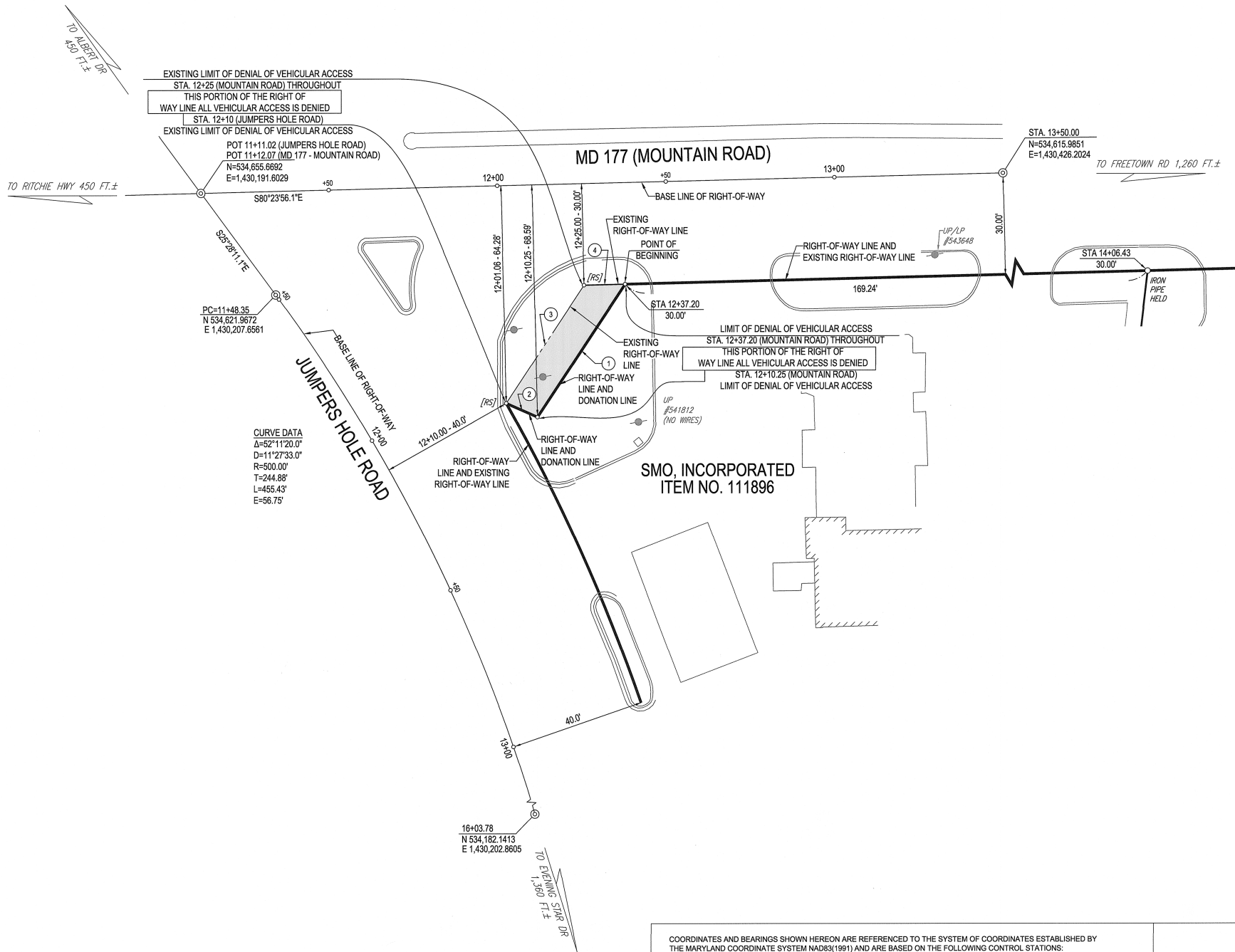
LOCATED IN	MONTGOMERY	COUNTY
PREPARED BY:	M. N. C. P. & P. C.	
ADDRESS:	SILVER SPRING, MD	
CONSTRUCTION PROJECT:		
CONSTRUCTION PROJECT NO:		

\* "POINT OF BEGINNING" AND LINE DESIGNATORS WERE ADDED TO IMAGE OF PLAT 4728 SHOWN HEREIN TO BE USED WITH THE METES & BOUNDS BOX IN SUPPORT OF THIS CONVEYANCE

MARYLAND COORDINATE SYSTEM  
NAD 83/91

SMO, INCORPORATED ITEM NO. 111896		
REC'D	FOLIO	
LIBER		
1	S44°31'55"W	47.07'
2	N55°15'58"W	10.15'
3	N44°31'55"E	41.81'
4	S80°23'58"E	12.20'
FEE SIMPLE AREA 444 SQ. FT. OR 0.010 ACRES ± SHOWN THUS: 		

LEGEND  
○ [RS] REBAR SET



THE RIGHT OF WAY LINES AND LINES OF DIVISION SHOWN HEREON ARE WERE ESTABLISHED FROM DEEDS AND PLATS OF RECORD AND FIELD SURVEYS. THE UNDERSIGNED WAS IN RESPONSIBLE CHARGE OF THE PREPARATION OF THIS PLAT AND THE SURVEYING WORK REFLECTED ON IT. THIS PLAT WAS DEVELOPED IN COMPLIANCE WITH THE REQUIREMENTS SET FORTH IN COMAR REGULATION 09.13.06.

ROBERT C. HARR, JR.  
PROFESSIONAL LAND SURVEYOR MD. REG. No. 21587  
EXP. 01-16-19  
DATE 8-16-18



- LEGEND
- REVERTIBLE EASEMENT FOR SUPPORTING SLOPES.
  - TEMPORARY CONSTRUCTION EASEMENT FOR SPECIAL PURPOSE AS INDICATED BY NOTATION ON THIS PLAT.
  - PERPETUAL EASEMENT FOR SPECIAL PURPOSE AS INDICATED ON THIS PLAT.
  - PERPETUAL EASEMENT FOR DRAINAGE FACILITY AS INDICATED BY NOTATION ON THIS PLAT.
  - PERPETUAL EASEMENT TO DISCHARGE FLOW OF WATER FROM OR INTO AN EXISTING WATERWAY OR NATURAL DRAINAGE COURSE.
  - PERPETUAL EASEMENT TO DISCHARGE FLOW OF WATER UPON EXISTING GROUND.

20'	0	20'	40'
SCALE: 1"=20'			
SENT TO RECORD OFFICE	20		
APPROVED BY:			
STATE ROADS COMMISSION CHAIRMAN	20	NO	DATE
			REVISION

COORDINATES AND BEARINGS SHOWN HEREON ARE REFERENCED TO THE SYSTEM OF COORDINATES ESTABLISHED BY THE MARYLAND COORDINATE SYSTEM NAD83(1991) AND ARE BASED ON THE FOLLOWING CONTROL STATIONS:			
DESIGNATION	NORTH	EAST	POINT DESCRIPTION
2123	533,645.3810	1,436,224.5030	IRON ROD W/METAL CAP
2122	534,853.0270	1,430,151.751	IRON ROD W/METAL CAP
BOOKS	PART OF PLATS	LOCATED IN ANNE ARUNDEL COUNTY	
	35914	PREPARED BY: BOHLER ENGINEERING	
	37214	ADDRESS: 22636 DAVIS DR. SUITE 250, STERLING, VA 20164	
		CONSTRUCTION PROJECT:	
		CONSTRUCTION PROJECT NO:	

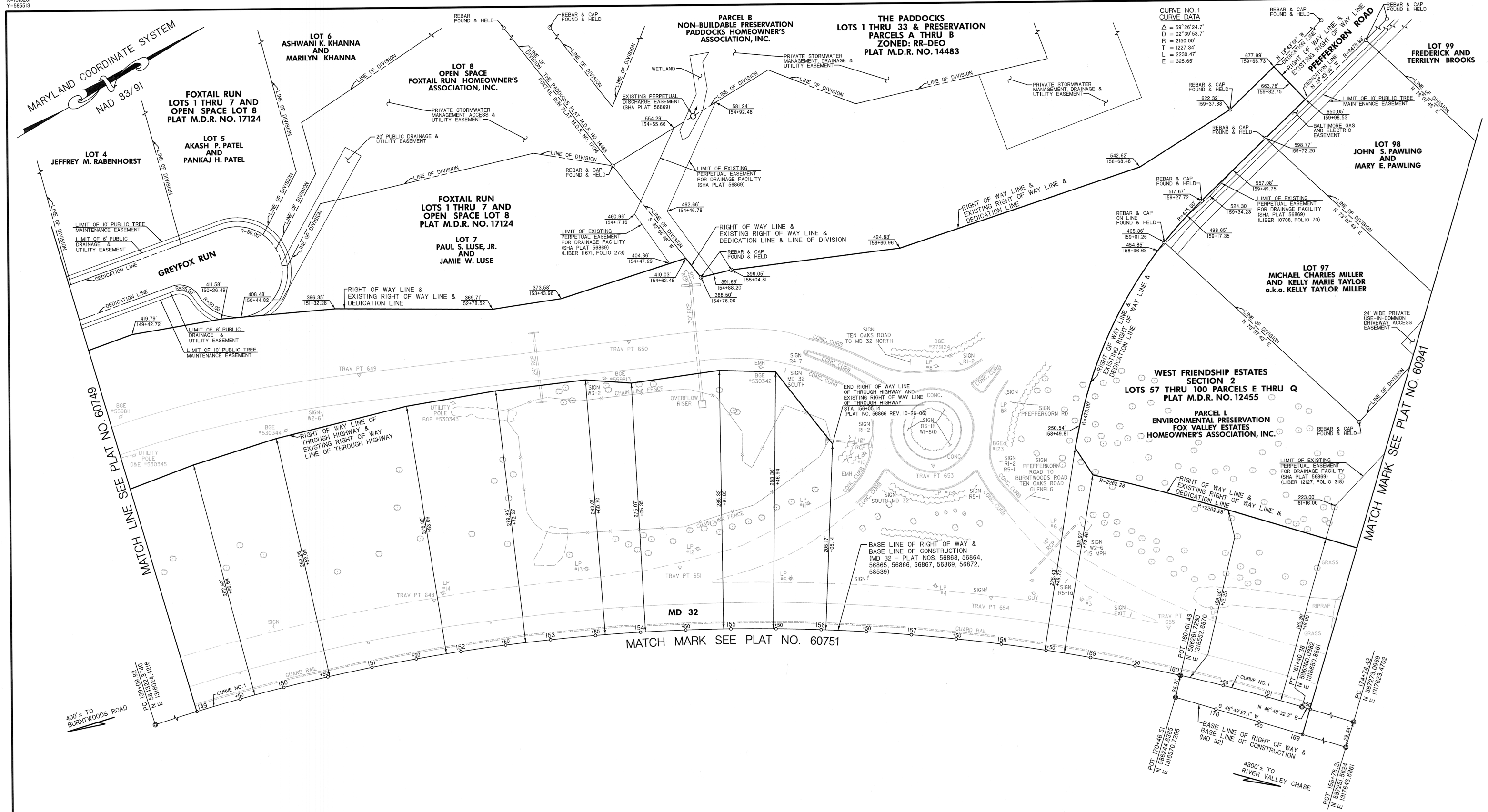
STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
STATE ROADS COMMISSION

RIGHT OF WAY PROJECT: MD 177 (MOUNTAIN ROAD) AND JUMPERS HOLE ROAD

RIGHT OF WAY PROJECT NO. RR-177-000-502  
ISSUED August 17, 2018 FEDERAL AID PROJECT NO.   
Barry C. Smith  
CHIEF, PLATS & SURVEYS DIVISION SCALE: 1"=20'

DONATION PLAT PLAT No. 61177





THE RIGHT OF WAY LINES AND LINES OF DIVISION SHOWN HEREON WERE ESTABLISHED FROM DEEDS AND PLATS OF RECORD, STATE HIGHWAY ADMINISTRATION PLATS, FIELD SURVEYS, AND OTHER EVIDENCE WHERE APPLICABLE. THE UNDERSIGNED WAS IN RESPONSIBLE CHARGE OF THE PREPARATION OF THIS PLAT AND THE LAND SURVEYING WORK REFLECTED IN IT. THIS PLAT WAS DEVELOPED IN COMPLIANCE WITH THE REQUIREMENTS SET FORTH IN COMAR REGULATION 09.13.06.

ROBERT L. GREEN, II  
PROFESSIONAL LAND SURVEYOR  
MD REG. NO. 21174  
EXP. DATE 06/27/2019  
DATE 12/21/19

**LEGEND**

- REVERTIBLE EASEMENT FOR SUPPORTING SLOPES.
- TEMPORARY CONSTRUCTION EASEMENT FOR SPECIAL PURPOSE AS INDICATED BY NOTATION ON THIS PLAT.
- PERPETUAL EASEMENT FOR SPECIAL PURPOSE AS INDICATED ON THIS PLAT.
- PERPETUAL EASEMENT FOR DRAINAGE FACILITY AS INDICATED BY NOTATION ON THIS PLAT.
- PERPETUAL EASEMENT TO DISCHARGE FLOW OF WATER FROM OR INTO AN EXISTING WATERWAY OR NATURAL DRAINAGE COURSE.
- PERPETUAL EASEMENT TO DISCHARGE FLOW OF WATER UPON EXISTING GROUND.

A PORTION OF THIS RIGHT OF WAY IS FOR A CONTROLLED ACCESS ARTERIAL HIGHWAY AND NO ACCESS, EITHER VEHICULAR, PEDESTRIAN, OR ANIMAL WILL BE PERMITTED ACROSS THE LINE DESIGNATED "RIGHT OF WAY LINE OF THROUGH HIGHWAY" EXCEPT BY MEANS OF SUCH PUBLIC ROAD CONNECTIONS AS ARE AUTHORIZED BY LAW.

50' 0 50' 100'  
SCALE: 1"=50'

SENT TO RECORD OFFICE \_\_\_\_\_ 20 \_\_\_\_\_  
APPROVED BY: \_\_\_\_\_ 20 \_\_\_\_\_  
STATE ROADS COMMISSION CHAIRMAN

COORDINATES AND BEARINGS SHOWN HEREON ARE REFERENCED TO THE SYSTEM OF COORDINATES ESTABLISHED BY THE MARYLAND COORDINATE SYSTEM NAD83(99) AND ARE BASED ON THE FOLLOWING STATE HIGHWAY ADMINISTRATION PLATS & SURVEYS DIVISION CONTROL STATIONS:

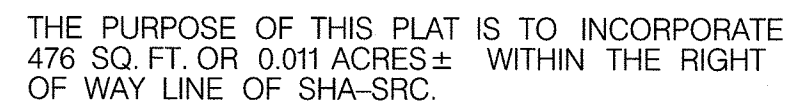
BOOKS	REVISIONS	PART OF PLATS	LOCATED IN	HOWARD	COUNTY
10187 (TOPO)	20498	20498			
10198 (TOPO)	23532 (REV. 5-II-60)	23532 (REV. 5-II-60)			
10599 (C.L.)	23585 (REV. 5-II-60)	23585 (REV. 5-II-60)			
12795 (C.L.)	25555	25555			
12798 (C.L.)	56863 (REV. 10-26-06)	56863 (REV. 10-26-06)			
22029 (M&B)	56806 (REV. 10-26-06)	56806 (REV. 10-26-06)			
31053 (TRAV)	56869 (REV. 10-26-06)	56869 (REV. 10-26-06)			

**STATE OF MARYLAND**  
**DEPARTMENT OF TRANSPORTATION**  
**STATE HIGHWAY ADMINISTRATION**  
**STATE ROADS COMMISSION**

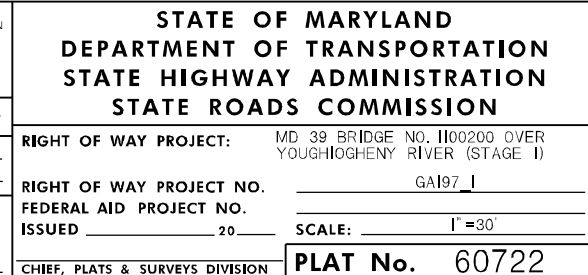
**RIGHT OF WAY PROJECT:** MD 32 FROM LINDEN CHURCH ROAD TO I-70  
**RIGHT OF WAY PROJECT NO.:** H0756\_3  
**FEDERAL AID PROJECT NO.:** \_\_\_\_\_  
**ISSUED:** January 24, 2019  
**CHIEF, PLATS & SURVEYS DIVISION:** \_\_\_\_\_  
**PLAT No.:** 60752



NAD 83/91



X=164402;  
Y=303305



**NO TITLE EXAMINATION, NO TITLE INSURANCE, NO JUDGMENTS  
DEED**

**THIS DEED**, made this 28<sup>th</sup> day of December in the year two thousand seventeen by **KRISTIN M. TULIP**, party of the first part, and **KRISTIN M. TULIP, Trustee of The KRISTIN M. TULIP Revocable Trust Agreement dated November 29, 2017**, party of the second part.

**WITNESSETH**, That in consideration of the sum of **ZERO CONSIDERATION**, the said party of the first part does hereby grant and convey to the said party of the second part, in fee simple, all that lot of ground situate in **Montgomery County**, State of Maryland, and described as follows, that is to say:

**BEING KNOWN AND DESIGNATED** as Part of lot numbered 2 in block lettered "C" in the subdivision known as "Meem's Addition to Gaithersburg" as recorded in the Land Records of Montgomery County in Plat Book 131 at Plat Reference 15202.

The improvements thereon being commonly known 22 West Diamond Avenue, Gaithersburg, Maryland 20877.

**TAX ID# 09-02491600**

**BEING** the same lot of ground which by Deed dated August 21, 2003 and recorded among the Land Records of Montgomery County in Liber No. 26239, folio 335 was granted and conveyed by Stanley L. Mathias and Lillian R. Mathias unto Stanley L. Mathias and Lillian R. Mathias, Trustees or their successors in trust under the Stanley L. Mathias and Lillian R. Mathias Revocable Living Trust dated the 2nd day of March, 2000, and any amendments thereto. Stanley L. Mathis departed this life on or about March 3, 2017. Lillian R. Mathias departed this life on or about October 2, 2010. Kristin M. Tulip was the Successor Trustee under the terms of that Trust.

**BEING ALSO** the same lot of ground which by Deed dated 12-28-2017 and recorded among the Land Records of Montgomery County in Liber No. 55836, folio 446 was granted and conveyed by Kristin M. Tulip, Successor Trustee of the Stanley L. Mathias and Lillian R. Mathias Joint Revocable Trust dated March 2, 2000, as amended by a First Amendment dated September 9, 2010, and any other amendments thereto, unto Kristin M. Tulip, the party of the first part herein.

1

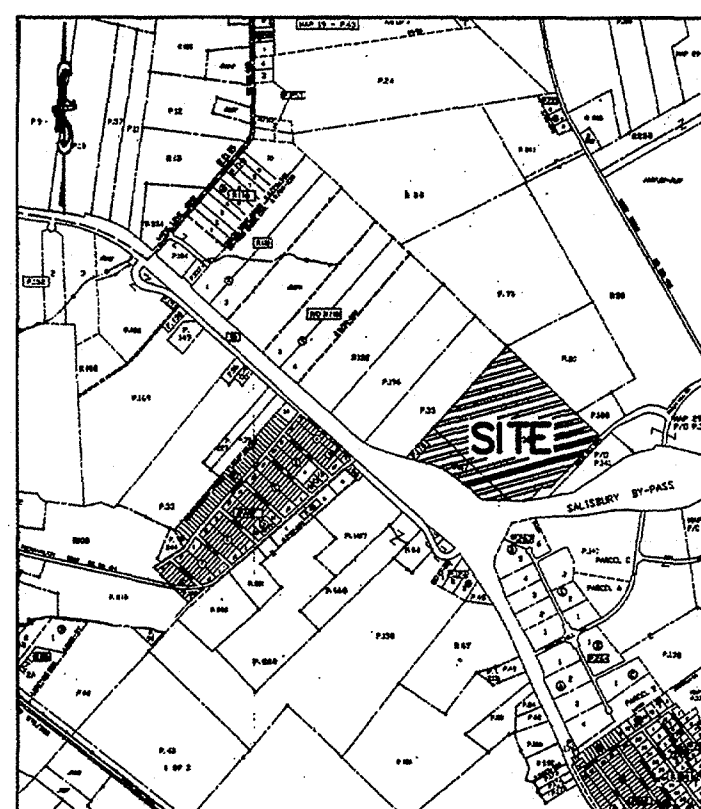
**MONTGOMERY COUNTY, MD**  
APPROVED BY KC

MAY 02 2018

\$ Exempt RECORDATION TAX PAID  
\$ Exempt TRANSFER TAX PAID

20  
to  
Kul





PARCEL 73  
DAVID & LINDA HOANG  
DEED REF: 2874/649  
PLAT REF: 724/25

P. 80  
ANDREW HUDYMA  
DEED 1720  
PLAT 805/81

P. 35  
STATE HIGHWAY ADMINISTRATION  
STATE OF MARYLAND  
DEED 1469/56  
PLAT 593/9

**PARCEL 36  
NAYLOR MILL ASSOCIATES  
(REMNANT OF) DEED 831/163  
±53.00 AC.**

P. 188  
STORER CABLE  
DEED 561/466  
PLAT 805/81  
"RADIO TOWER SITE"

Wicomico County  
July 2, 2008  
MSB Cal 15 Folio 65B

T: 69.32'  
C: 138.18'  
Cb: S 48°03'57" W  
R: 855.25'  
D: 9°16'02"

P/O PARCEL 141  
FERGUSON ENTERPRISES INC.  
DEED REF: 2663/404

1388.41' W  
N 89°29'37" E  
PARCEL 67  
NAYLOR MILL ASSOCIATES  
(REMNANT OF) DEED 831/156  
±8.64 AC.  
INTENDED TO BE CONVEYED TO  
WESTWOOD DEVELOPMENT, LLC  
421.21'  
S 84°30'00" E

U. S.

ROUTE 50  
(R/W VARIES)

171.01'

568°39'43"E

575°35'38"E

36'

DENIED VEHICULAR ACCESS  
THROUGH THESE POINTS

84.63' - 84.25' 85' W

- IRON PIPE FOUND
- CEMENT POST FOUND
- ◎ REBAR/CAP SET
- UNMARKED POINT



**BRIAN M. DENNIS**  
& ASSOCIATES, INC.

124 E. Market Street-Salisbury, MD 21801  
TEL 410-548-1815 - FAX 410-543-8571

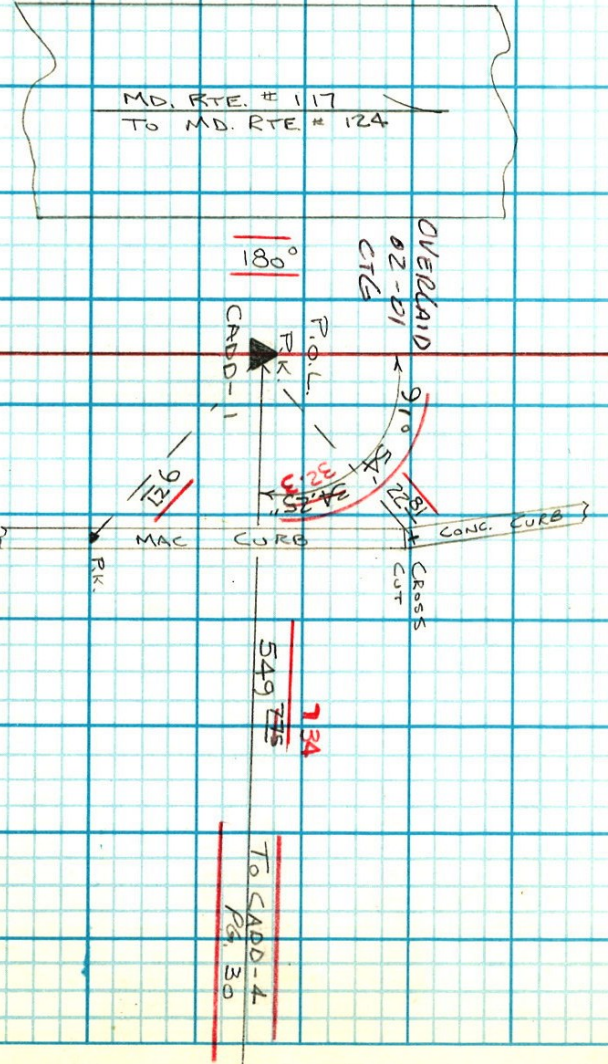
BOUNDARY SURVEY OF TWO PARCELS FOR <b>WESTWOOD DEVELOPMENT LLC</b> SALISBURY, MARYLAND			
SCALE	1" = 100'	DATE	26 JUNE 2008
DEED REF.	AS SHOWN	SUBD.	
PLAT REF.	AS SHOWN	LOT ~	BLOCK ~
COUNTY	WICOMICO	DISTRICT	SALISBURY NO. 9
TAX MAP	28 PARCELS AS SHOWN	ZONING	LB-1
F.I.R.M. MAP NO.	240078 0018C	FLUOR HAZARD ZONE	FC
PROJ. NO.	04-039-08	SURV/DR	BMD FB/pa 105/77

GRAPHIC SCALE

( IN FEET )  
1 inch = 100 ft.



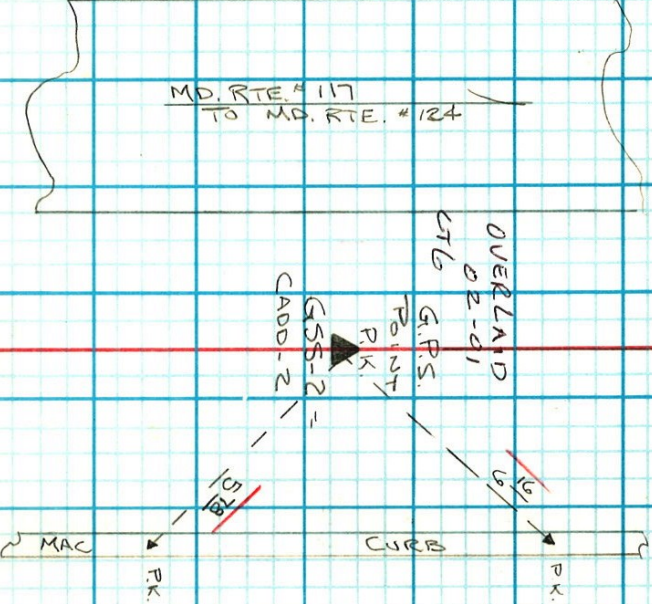
To GSS-3 = Pg. 35  
CADD-3



NAD 88  
ELEV.  
440.70  
NAD 88/91  
N 536823.6823  
E 1252558.7773

134  
549  
To CADD-4  
Pg. 30

715  
98.72



BK# 24128 Pg. 4  
NAD 88/91  
N 536820.396  
E 1252607.437  
NAD 88  
ELEV.  
444.58

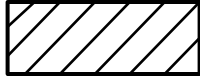
CADD T SETUP FOR DATA COLLECTION  
OF PARK & RIDE @ I-270 & MD. #117

**~ TYPES OF EASEMENTS USED BY SHA ~**



**RIGHT OF WAY in FEE SIMPLE –**

Fee is the same as “fief,” which is defined as a feudal estate, something over which one has rights or exercises control. In American law, the terms “fee,” “fee simple,” and “fee simple absolute” are equivalent.



**REVERTIBLE EASEMENT FOR SUPPORTING SLOPES -**

(Used for engineered cut/fill slopes beyond the S.H.A. right of way.)

These easements **DO NOT** automatically revert back to the property owner.

A review by a State District Engineer and a deed of release are required.)



**TEMPORARY CONSTRUCTION EASEMENT FOR SPECIAL PURPOSE AS INDICATED BY NOTATION ON PLAT -**

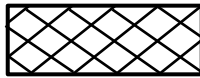
(Used for temporary construction, such as fine grading, entrance adjustments, erosion and sediment control, etc.) These easements DO NOT always automatically revert to the property owner. Sometimes there are special conditions or time limitations associated with the reversion of these easements.



**PERPETUAL EASEMENT FOR SPECIAL PURPOSE AS INDICATED ON PLAT -**

(Used where long-term SHA land rights are necessary, e.g. roadways crossing railroads, traffic signal devices, impacts to US lands, etc.

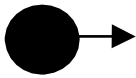
These easements last in perpetuity (forever).



**PERPETUAL EASEMENT FOR DRAINAGE FACILITY AS INDICATED BY NOTATION ON PLAT –**

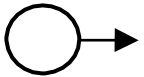
(Used where long-term SHA land rights are necessary, e.g. storm drain pipe/ Inlet systems, engineered drainage ditches, stream relocations / restorations, etc.

These easements last in perpetuity (forever).

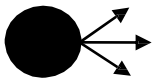


**PERPETUAL EASEMENT TO DISCHARGE FLOW OF WATER FROM OR INTO EXISTING WATERWAY OR NATURAL DRAINAGE COURSE -**

(May be placed on the right of way line or at the end of a perpetual drainage easement.)



**EXISTING PERPETUAL DISCHARGE EASEMENT**

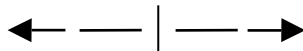


**PERPETUAL EASEMENT TO DISCHARGE FLOW OF WATER UPON EXISTING GROUND -**

(May be placed on the right of way line or at the end of a perpetual drainage easement.)



**EXISTING PERPETUAL DISCHARGE EASEMENT**



**APPROXIMATE GENERAL DRAINAGE FLOW PATTERN**

(Drainage arrows shown on plats and plans.)

**PLATS  
AND  
SURVEYS**

**PLAT GUIDELINES**

**LINEWORK  
C.A.D.D.  
AUGUST 2010**



LINEWORK GUIDELINES FOR C.A.D.D.RIGHT OF WAY**NOTE**

LS = Line style

LOD = Line Of Division

LINE WEIGHT

<u>WT = 9/LS=0</u>	1.	Right of Way Line
<u>WT = 9//LS=0</u>	2.	Right of Way Line of Through Highway
<u>WT = 4/LS=LOD</u>	3.	Existing Right of Way Line
<u>WT = 9/LS=0</u>	4.	Right of Way Line and Existing Right of Way Line
<u>WT = 9/LS=0</u>	5.	Right of Way Line and Line of Division
<u>WT = 9/LS=0</u>	6.	Right of Way Line and Dedication Line
<u>WT = 9/LS=0</u>	7.	Right of Way Line and _____ County Right of Way Line
<u>WT = 9/LS=0</u>	8.	Right of Way Line and _____ Railroad Right of Way Line
<u>WT = 5/LS=LOD</u>	9.	_____ County Right of Way Line
<u>WT = 5/LS=LOD</u>	10.	_____ Railroad Right of Way Line
<u>WT = 9/LS=0</u>	11.	Right of Way Line and Reservation Line
<u>WT = 3/LS=0</u>	12.	Base Line of Right of Way
<u>WT = 3/LS=0</u>	13.	Base Line of Construction
<u>WT = 3/LS=0</u>	14.	Base Line of Right of Way and Base Line of Construction
<u>WT = 3/LS=0</u>	15.	Base Line of Survey
<u>WT = 3/LS=0</u>	16.	Base Line of Right of Way and Base Line of Survey
<u>WT = 9/LS=0</u>	17.	Right of way line of Through Highway and existing Right of Way Line of Through Highway
<u>WT = 4/LS=LOD</u>	18.	Existing Right of Way Line of Through Highway



LINEWORK GUIDELINES FOR C.A.D.D.PROPERTYLINEWEIGHT

- |                           |                          |
|---------------------------|--------------------------|
| <u>WT = 3/LS=0</u>        | 1. Reservation Line      |
| <u>WT = 3/LS=LOD</u>      | 2. Line of Division      |
| <u>WT = 3/LS=LOT LINE</u> | 3. Subdivision Lot Lines |
| <u>WT = 3/LS=0</u>        | 4. Lease Lines           |

EASEMENTSLINEWEIGHT

- |                    |  |
|--------------------|--|
| <u>WT = 3/LS=0</u> | 1. Limits of Revertible Easement for Supporting Slopes         |
| <u>WT = 1/LS=0</u> | 2. Revertible Easement for Supporting Slopes hatching          |
| <u>WT = 1/LS=0</u> | 3. Perpetual Easement for drainage facility cross-hatching     |
| <u>WT = 3/LS=0</u> | 4. Limits of Perpetual Easement for drainage facility          |
| <u>WT = 3/LS=0</u> | 5. Limits of Perpetual Easement for special purpose            |
| <u>WT = 5/LS=0</u> | 6. Perpetual Easement for Special Purpose hatching             |
| <u>WT = 3/LS=0</u> | 7. Limits of Temporary Easement                                |
| <u>WT = 1/LS=0</u> | 8. Temporary Easement hatching                                 |
| <u>WT = 3/LS=0</u> | 9. Limits of utility right of ways                             |
| <u>WT = 3/LS=0</u> | 10. Limits of utility easements                                |
| <u>WT = 3/LS=0</u> | 11. Limits of county easements for slopes                      |
| <u>WT = 3/LS=0</u> | 12. Limits of county perpetual easements for drainage facility |
| <u>WT = 3/LS=0</u> | 13. Limits of flood plains.                                    |

LINEWORK GUIDELINES FOR C.A.D.D.GRAPHICSLINEWEIGHT

- |                    |  |
|--------------------|--|
| <u>WT = 2/LS=0</u> | 1. Dimension and Bracket Dimension Lines   |
| <u>WT = 3/LS=0</u> | 2. Leads for notes (i.e. Right of Way Line, point of beginning, Revertible easement for supporting slopes, etc.) |
| <u>WT = 3/LS=0</u> | 3. Leads for overpass and underpass notes  |
| <u>WT = 3/LS=0</u> | 4. Leads for limits of denial of vehicular access notes  |
| <u>WT = 3/LS=0</u> | 5. Leads for end right of way line of through highway notes  |
| <u>WT = 3/LS=0</u> | 6. Leads for existing limit of denial of vehicular access notes  |
| <u>WT = 3/LS=0</u> | 7. Leads for existing end right of way line of through highway notes   |
| <u>WT = 3/LS=0</u> | 8. Leads for PC's, PT's, PRC's, PCC's, ST's, CS's, SC's and TC's   |

MISCELLANEOUSLINE WEIGHT

- |                    |   |
|--------------------|---|
| <u>WT = 3/LS=0</u> | 1. Dedication Line  |
| <u>WT = 3</u>      | 2. Metes and Bounds Bubbles (AC = 15, 15.1, 15.2, 15.3 or 15.5) |
| <u>WT = 5/LS=0</u> | 3. Metes and Bounds block borders                               |
| <u>WT = 5/LS=0</u> | 4. Blow up or insert borders                                    |
| <u>WT = 3/LS=0</u> | 5. Drainage flow arrows   |
| <u>WT = 9/LS=0</u> | 6. Proposed pipe culverts                                       |
| <u>WT = 3/LS=0</u> | 7. High or low point of drainage                                |
| <u>WT = 3</u>      | 8. Circles for Metes and Bounds breaks                          |

LINEWORK GUIDELINES FOR C.A.D.D.

MISCELLANEOUS

LINE WEIGHT

WT = 1

9. Topographical Linework

WT = 3/LS=0

10. Interior Lines of Metes and Bounds Block

WT = 5/LS=0

11. Match Mark

**PLATS  
AND  
SURVEYS**

**PLAT GUIDELINES**

**TEXT  
C.A.D.D.  
AUGUST 2010**

TEXT GUIDELINES FOR C.A.D.D. – 50 SCALERIGHT OF WAYTEXT SIZE/LINE WEIGHT

<u>TX = 5/WT = 3</u>	1.	Right of Way Line (AC = 325 or 326)
<u>TX = 5/WT = 3</u>	2.	Right of Way Line of Through Highway (AC = 339, 340 or 341)
<u>TX = 5/WT = 3</u>	3.	Existing Right of Way Line (AC = 335 or 336)
<u>TX = 5/WT = 3</u>	4.	Right of Way Line and Existing Right of Way Line (AC = 327)
<u>TX = 5/WT = 3</u>	5.	Right of Way Line and Line of Division (AC = 328 or 329)
<u>TX = 5/WT = 3</u>	6.	Right of Way Line and Dedication Line (AC = 331)
<u>TX = 5/WT = 3</u>	7.	Right of Way Line and _____ County Right of Way Line
<u>TX = 5/WT = 3</u>	8.	Right of Way Line and _____ Railroad Right of Way Line (AC = 349)
<u>TX = 5/WT = 3</u>	9.	_____ County Right of Way Line
<u>TX = 5/WT = 3</u>	10.	_____ Railroad Right of Way Line
<u>TX = 5/WT = 3</u>	11.	Right of Way Line and Reservation Line
<u>TX = 5/WT = 3</u>	12.	Base Line of Right of Way (AC = 361 or 362)
<u>TX = 5/WT = 3</u>	13.	Base Line of Constuction (AC = 365)
<u>TX = 5/WT = 3</u>	14.	Base Line of Right of Way and Base Line of Construction (AC = 366)
<u>TX = 5/WT = 3</u>	15.	Base Line of Survey (AC = 363)
<u>TX = 5/WT = 3</u>	16.	Base Line of Right of Way and Base Line of Survey
<u>TX = 5/WT = 3</u>	17.	Base Line Stations (even stations)
<u>TX = 4/WT = 3</u>	18.	Base Line Stations for offsets and + 50 stations

TEXT GUIDELINES FOR C.A.D.D. – 50 SCALERIGHT OF WAY (cont.)TEXT SIZE/LINE WEIGHT

<u>TX = 4/WT = 3</u>	19.	Offset distances
<u>TX = 4/WT = 3</u>	20.	Base Line bearings
<u>TX = 5/WT = 3</u>	21.	Base Line coordinate values
<u>TX = 4/WT = 3</u>	22.	Base Line angles
<u>TX = 5/WT = 3</u>	23.	Base Line equalities
<u>TX = 5/WT = 3</u>	24.	PC's, PT's, PRC's, PCC's, ST's, TS's, CS's and SC's
<u>TX = 4/WT = 3</u>	25.	Curve Data (AC = 18 OR 18.5)
<u>TX = 4/WT = 3</u>	26.	End Right of Way Line of Through Highway (AC = 344)
<u>TX = 4/WT = 3</u>	27.	End Existing Right of Way Line of Through Highway (AC = 345)
<u>TX = 7/WT = 5</u>	28.	Road Names
<u>TX = 5/WT = 3</u>	29.	Right of way line of through highway and existing right of way Line of through highway (AC = 342 or 343)
<u>TX = 5/WT = 3</u>	30.	Existing Right of Way Line of Through Highway (AC = 337 or 338)

PROPERTY

<u>TX = 4/WT = 3</u>	1.	Line of Division (AC = 377 or 378)
<u>TX = 7/WT = 3</u>	2.	Subdivision Names
<u>TX = 5/WT = 3</u>	3.	Subdivision Recording Information
<u>TX = 4/WT = 3</u>	4.	Lease Lines (AC = 384)
<u>TX = 4/WT = 1</u>	5.	Metes and Bounds bubble numbers

TEXT GUIDELINES FOR C.A.D.D. – 50 SCALEPROPERTY (cont.)TEXT SIZE/LINE WEIGHT

<u>TX = 6/WT = 4</u>	6.	Metes and Bounds
<u>TX = 6/WT = 4</u>	7.	Acreage and Square Footage in Metes and Bounds Block
<u>TX = 6/WT = 5</u>	8.	Property Names
<u>TX = 4/WT = 3</u>	9.	Bearings on lines of division
<u>TX = 4/WT = 3</u>	10.	Deed reference notes
<u>TX = 4/WT = 3</u>	11.	Point of Beginning (AC = 375 or 376)

EASEMENT

<u>TX = 4/WT = 3</u>	1.	Revertible Easement for Special Purpose
<u>TX = 4/WT = 3</u>	2.	Revertible Easement for Supporting Slopes (AC = 352 or 353)
<u>TX = 4/WT = 3</u>	3.	Perpetual Easement for drainage area (AC = 356 or 357)
<u>TX = 4/WT = 3</u>	4.	Perpetual Easement for inlet ditch
<u>TX = 4/WT = 3</u>	5.	Perpetual Easement for outlet ditch
<u>TX = 4/WT = 3</u>	6.	Perpetual Easement for Stream Change
<u>TX = 4/WT = 3</u>	7.	Perpetual Easement for Special Purpose
<u>TX = 4/WT = 3</u>	8.	Temporary Easement “See Note A” (AC = 360)
<u>TX = 4/WT = 3</u>	9.	Note A for Temporary Easement (AC = 360.1)
<u>TX = 4/WT = 3</u>	10.	Limit of Utility right of way note
<u>TX = 4/WT = 3</u>	11.	Limit of utility easement note
<u>TX = 4/WT = 3</u>	12.	Limit of flood plain note

TEXT GUIDELINES FOR C.A.D.D. – 50 SCALEEASEMENT (cont.)TEXT SIZE/LINE WEIGHT

- |                      |     |  |
|----------------------|-----|--|
| <u>TX = 4/WT = 3</u> | 13. | Limit of county easements for slopes             |
| <u>TX = 4/WT = 3</u> | 14. | Limit of county perpetual easements for drainage |
| <u>TX = 5/WT = 3</u> | 15. | Underlined "Note 'A'"                            |

GRAPHIC

- |                      |    |  |
|----------------------|----|--|
| <u>TX = 4/WT = 1</u> | 1. | Topography delineation                       |
| <u>TX = 4/WT = 3</u> | 2. | Directional arrow locator                    |
| <u>TX = 5/WT = 4</u> | 3. | Blow-up or insert scales                     |
| <u>TX = 4/WT = 1</u> | 4. | Proposed pipe culvert, box culvert labelling |
| <u>TX = 6/WT = 4</u> | 5. | Title block contract                         |
| <u>TX = 6/WT = 4</u> | 6. | Title block termini                          |

MISCELLANEOUS

- |                      |    |   |
|----------------------|----|---|
| <u>TX = 4/WT = 3</u> | 1. | Dedication Line (AC = 379 or 380)                             |
| <u>TX = 4/WT = 3</u> | 2. | Reservation Line (AC = 383)                                   |
| <u>TX = 4/WT = 3</u> | 3. | Overpass and Underpass notes                                  |
| <u>TX = 4/WT = 3</u> | 4. | Limit of denial of vehicular access notes (AC = 346)          |
| <u>TX = 4/WT = 3</u> | 5. | Existing Limit of denial of vehicular access notes (AC = 347) |
| <u>TX = 5/WT = 3</u> | 6. | For metes and bounds see plat ____ note in a box (00)         |
| <u>TX = 8/WT = 7</u> | 7. | Match Mark See Plat _____                                     |



TEXT GUIDELINES FOR C.A.D.D. – 50 SCALEMISCELLANEOUS (cont.)TEXT SIZE/LINE WEIGHT

- |                       |     |  |
|-----------------------|-----|--|
| <u>TX = 8/WT = 7</u>  | 8.  | Match Mark See Plat _____<br>Contract _____  |
| <u>TX = 4/WT = 3</u>  | 9.  | Expressway or controlled access arterial<br>Highway note (AC = 300, 301, 302 or 303) |
| <u>TX = 4/WT = 3</u>  | 10. | Books, part of plats and revisions   |
| <u>TX = 6/WT = 3</u>  | 11. | Area conveyed or to be conveyed note (AC = 305)                                      |
| <u>TX = 12/WT = 9</u> | 12. | Plat number  |

In order to allow the draftsmen a certain amount of individuality, North Arrows and Directional Arrows may be shown how and where the draftsmen feels fit within reason. Metes and bounds breaks and base line circles may be shown whatever size the draftsman feels is appropriate and metes and bounds bubbles should be sized as to fit around the course numbers all within a reasonable size. The North arrow should be placed in a position on the plats where it can be easily located.

08-18-2022

## **MDOT - SHA - OHD - PSD** **PLAT DRAFTING CHECKLIST**

The undersigned certify that they have reviewed the submitted plat for compliance with this checklist.

Plat Number: \_\_\_\_\_ Drafter: \_\_\_\_\_

Surveyor of Record: \_\_\_\_\_

### **BASELINE**

- ☐ ☐ 1. Station all Base Lines to show whole and +50 stations; bearing to 0.1 second; and position curve data on the inside of the curve. If the plat is 100 scale or larger use of +50 stations is optional as space allows.
- ☐ ☐ 2. All Base Line equalities should be labeled and correctly positioned for back and ahead stations.
- ☐ ☐ 3. All Base Line types should be labeled. (i.e. Base Line of Right of Way, Center Line of Survey, Center Line of Construction and Base Line of Survey, Base Line of Right of Way and Base Line of Construction, etc.) Source of base line should be labeled i.e.: (SHA PLAT 12546).
- ☐ ☐ 4. All Base Line curves should have corresponding curve data, delta, and degree of curve angles to a 0.1 tenth of a second.
- ☐ ☐ 5. All components of curves should be labeled. (i.e. PC's, PT's, SC's, CS's, PRC's, PCC's, TS's, ST's)
- ☐ ☐ 6. The Curve Data on the plat should be consistent with the computer output curve data and/or the curve data of record, as appropriate.
- ☐ ☐ 7. There should be (2) sets of **MD NAD 83/91** coordinates per Base Line per plat that are determined from GPS Survey and carried out to the 4th decimal place 0.1234 (ten thousandth of a foot).

**RIGHT OF WAY**  
**EXISTING AND PROPOSED**

- ☐ ☐ 8. All angle breaks in Existing Right of Way Lines and Right of Way Lines should have station/offset ties.
- ☐ ☐ 9. All angle breaks in Existing Right of Way Lines of Through Highway and Right of Way Lines of Through Highway should have station/offset ties.
- ☐ ☐ 10. All Right of Way Line labels should be placed outside the right of way line.
- ☐ ☐ 11. All Right of Way Line of Through Highway labels should be placed inside the right of way line.
- ☐ ☐ 12. All End Right of Way Line of Through Highway should be labeled, stationed and the road name correctly indicated.
- ☐ ☐ 13. All County Right of Way Line labels should be placed outside the right of way line.
- ☐ ☐ 14. All Railroad Right of Way Line labels should be placed outside the right of way line.
- ☐ ☐ 15. All curved Right of Way Line and Right of Way Line of Through Highway should have the radii labeled when not concentric with the Base Line. Label the radius where the curve begins and ends.
- ☐ ☐ 16. All Private Utility Right of Way Line labels should include source deed and plat reference, as applicable.
- ☐ ☐ 17. All Lines of Division, Dedication Lines, Reservation Lines and Lease Lines should be labeled as such. Show bearings for those lines that intersect any SHA Right-of-Way Lines that have been established.
- ☐ ☐ 18. All Fee areas and Perpetual Easement areas should have a Point of Beginning. Use one common Point of Beginning for multiple parcels if possible.
- ☐ ☐ 19. All Point of Beginning labels should be on a *NEW* Right of Way Line and have a deed and plat reference, as applicable, with bearings and distances, to a deed or plat call.

**EASEMENTS**  
**EXISTING AND PROPOSED**

- ☐ ☐ 20. All angle breaks in Existing Easement Lines and Easement Lines should have station/offset ties. Exception: if an existing easement is being merged into new fee right of way or an expanded easement of the same type then station/offset ties are not shown for the easement lines.
- ☐ ☐ 21. All New (proposed) Easement areas should be labeled and hatched appropriately.
- ☐ ☐ 22. All Existing Easement areas should be labeled and include source plat reference in parentheses and associated deed reference, if available, positioned under the plat reference. For example, SHA Plat 95482 would be shown as:

(SHA PLAT 95482)  
MDR 5287/522
- ☐ ☐ 23. All Temporary Easements should be labeled with correct “see Note A” or “see Note B”, etc.
- ☐ ☐ 24. All Perpetual Discharge Easement arrows should be identified as either Perpetual Discharge Easement or Existing Perpetual Discharge Easement.
- ☐ ☐ 25. All County Easement labels should include source deed and plat reference.
- ☐ ☐ 26. All Private and Public Utility Easement labels should include source deed and plat reference.

**ACCESS CONTROL NOTES**  
**THROUGH HIGHWAY, CONTROL BREAKS**

- ☐ ☐ 27. All Limit of Denial labels should contain correct stations and the leader should not terminate with an arrowhead.
- ☐ ☐ 28. All Overpass and Underpass labels should contain the correct station and the leader should not terminate with an arrowhead.
- ☐ ☐ 29. Confirm that the appropriate Right of Way Line of Through Highway Control note is used in the border note at the bottom of plat.

**PROPERTY LABELS****NAME, PLAT REFERENCE, ITEM NUMBER****ACQUISITION PROPERTY LABELS****METES & BOUNDS BOX, NUMBER BUBBLES, POB**

- ☐ ☐ 30. All subdivisions should be labeled with the appropriate subdivision plat name, recording information (Plat Book/Page), block number and/or section number, and lot number.
- ☐ ☐ 31. Confirm bearings and distances match on adjacent parcels.
- ☐ ☐ 32. All Properties being Acquired should be labeled within the property boundary on the plat and within the header of the Metes & Bounds box with the full property owner's name and item number.
- ☐ ☐ 33. The Metes & Bounds box should be located on the plat where the Point of Beginning appears.
- ☐ ☐ 34. All Metes & Bounds should be run in a clockwise direction.
- ☐ ☐ 35. All Metes & Bounds should mathematically close as listed; square footage reported to the nearest foot and acreage reported to three decimal places 0.123 (thousandth of a foot).
- ☐ ☐ 36. When Metes & Bounds box or TCE area box are shown on a separate plat use the "cross reference" note: "For Metes and Bounds See Plat No. xxxxx ". placed in a rectangular box within the subject parcel.
- ☐ ☐ 37. Line number bubbles should be clear of any shading or hatching if located within a fee or easement area or any topographic feature.
- ☐ ☐ 38. Line number bubble leaders should not cross each other or any other line.

**PLAT BORDER****TITLE BOX, SURVEY CONTROL BOX, CERTIFICATE**

- ☐ ☐ 39. Confirm that the termini and contract number listed in the title box match what is reported in OREMS and that the termini and contract number for construction match the construction project name and number.
- ☐ ☐ 40. Confirm with the Project Manager if there is a federal aid number.
- ☐ ☐ 41. Confirm plat number.

- ☐ ☐ 42. List all plat numbers used in "Part of Plat" along with the latest revision date shown for each plat.
- ☐ ☐ 43. Indicate appropriate survey book number(s), containing base line, center line, topography, metes & bounds and control traverse and traverse information, as appropriate.
- ☐ ☐ 44. Fill in the appropriate file/directory references for. dgn and .ics. as provided by the SHA plat reviewer.
- ☐ ☐ 45. Fill in the Drafted By, Computed By, and Checked By lines.
- ☐ ☐ 46. Confirm scale and bar scale match and are correct.
- ☐ ☐ 47. Confirm plat border corner coordinates for GIS georeferencing. (To the nearest foot). They should be in X, Y format. (E over N)
- ☐ ☐ 48. Confirm the Registered Surveyors License number and expiration date in the Surveyor's Certification Note.
- ☐ ☐ 49. Confirm Control Note depicting the controlling stations have correct NAD 83/91 coordinate values, name and book/page reference.

## **GENERAL**

- ☐ ☐ 50. All shading for Fee areas, Conveyed areas, Easement areas and Extra Land areas should comply with the legend.
- ☐ ☐ 51. Confirm parallel bearings and distances with ties to base lines.
- ☐ ☐ 52. Confirm correct location of metes & bounds bubbles especially in crowded areas. Use detail cookie as needed.
- ☐ ☐ 53. Confirm there are circles at line breaks on Fee areas, Perpetual Easement areas, and at deed references.
- ☐ ☐ 54. Confirm accuracy of cross-reference notes "Match Mark See Plat No. xxxxx".
- ☐ ☐ 55. Confirm all Route Numbers, Road Names and Ramps are labeled.
- ☐ ☐ 56. Confirm all topography is labeled or removed, as appropriate.
- ☐ ☐ 57. Confirm directional arrows indicating direction to nearest intersecting street

or road include a distance to nearest 10 foot. County roads may be used as an intersecting street.

- ☐ ☐ 58. Confirm the north arrow is located on the plat, labeled with the datum, and in the correct orientation. The north arrow should generally be placed in the upper left corner of the plat.
- ☐ ☐ 59. Check for correct text size, line style and line weight for all plat elements.
- ☐ ☐ 60. Check for general **NEATNESS, LEGABILITY** and **APPEARANCE** of plat.
- ☐ ☐ 61. Confirm all text “falls on its feet” or is normal to the page.
- ☐ ☐ 62. There should be no overlapping leader lines.
- ☐ ☐ 63. Use appropriate label when labeling property ownership:
  - ET AL. – and others
  - ET UX. – and wife
  - ET VIR. – and husbandNote that there is a period after the AL. UX. and VIR. because these are abbreviations like sta. or conc.

#### **ADDITIONAL CHECKS FOR REVISION AND REPLACEMENTS PLATS**

- ☐ ☐ 64. Make sure all areas of revision are labeled with the appropriate numbered Box, for example, ☐ even in areas that now become vacant (i.e.: complete removal of an easement or fee area).
- ☐ ☐ 65. Confirm statement in revision box reflects all changes made.
- ☐ ☐ 66. Confirm if multiple plats are impacted that the revision notes are placed on all associated plats.
- ☐ ☐ 67. Confirm match mark plat numbers are revised as appropriate. If the only change to a plat would be the match mark number, do not indicate a revision for that plat.
- ☐ ☐ 68. Confirm the plat you are replacing is referenced in the Part of Plats on the replacement plat.

**COMMENTS:** Use this area to detail special considerations for non-compliance.



**DRAFTED DONATION PLAT REQUIREMENTS**  
**(In addition to the Standard SHA Drafters Plat Checklist)**

- ☐ The Drafter's Plat Checklist must be submitted with the 1<sup>st</sup> plat submittal – (**Checklist is enclosed**)
- ☐ Existing SHA right of way plats should be obtained from SHA's Office of Real Estate – Records & Research Section. – (**Request Form is enclosed**)
- ☐ 2 (sets) of MD "Coordinate System Grid" values must be shown on the plat.
- ☐ A bearing & distance reference to 2 or more physical property corners must be shown.
- ☐ The metes & bounds must be shown in a clockwise direction.
- ☐ SHA/PSD will obtain an item number for the property being donated in fee simple from the District Office.
- ☐ SHA/PSD will obtain a 'RR xxx-xxx-xxx' contract number from the District Office.
- ☐ SHA/PSD will provide a Plat Number for the newly prepared plat.
- ☐ All plats will measure 22"x 34". (The plat borders, standard notes, and standard cells are available in Micro-Station & Auto Cadd format)

01-24-2020

## **MDOT - SHA - OHD - PSD** **DESCRIPTION CHECKLIST**

The undersigned certify that they have reviewed the  
submitted description for compliance with this checklist.

Item Number: \_\_\_\_\_ Scribe: \_\_\_\_\_

Surveyor of Record: \_\_\_\_\_

### **HEADER**

- ☐ ☐ 1. Identify the type of conveyance or acquisition, e.g. Fee Simple Area or Road Transfer.
- ☐ ☐ 2. Identify the Grantor to Grantee, e.g. from SHA to Harford County.
- ☐ ☐ 3. As applicable, list the following:
  - Road Transfer Name
  - Right of Way Project No.
  - Right of Way Project
  - Item No.
  - Road Transfer Item No.
  - Linear Feet
  - Area
  - Datum

### **INTRODUCTION**

- ☐ ☐ 4. For acquisitions begin with "**ALL THAT PIECE OR PARCEL OF LAND...**"
- ☐ ☐ 5. For road transfers or conveyances, begin with "**THE GRANTORS DO HEREBY GRANT, CONVEY, AND QUITCLAIM** unto grantee all right, title, and interest in and to [insert appropriate roadbed, road name, or parcel here]..."
- ☐ ☐ 6. Identify the election district(s), county name, and state name (i.e. Maryland).
- ☐ ☐ 7. For road transfers, end with the phrase "... together with the appurtenances thereto belonging or in anywise appertaining."

## **BODY OF DESCRIPTION**

- ☐ ☐ 8. Begin paragraph with “**BEGINNING FOR THE SAME...**”
- ☐ ☐ 9. The point of beginning shall be chosen carefully and described in a manner to differentiate it from any other point beyond a reasonable doubt.
- ☐ ☐ 10. The description shall call for sufficient monumentation or reference control points that were used to determine the property lines. Right of way lines should be tied to the re-established base line of right of way.
- ☐ ☐ 11. Reference adjoining record title lines as deemed appropriate, especially when they intersect the right of way line being described.
- ☐ ☐ 12. Curved boundary lines shall be described using sufficient data to define the curve, i.e. the curve direction, radius, arc length, chord bearing, and chord distance. Identify if it is coming into or out of a nontangential curve.
- ☐ ☐ 13. The following is standard language used to describe a point on the right of way line at a specific station and offset:  
“... to a point situate 123.45 feet from and measured at a right angle to the left (or right) of station 35+81.83 of the base line of right of way of MD 123, as delineated on SHA Plat No. 12345, thence...”
- ☐ ☐ 14. Use the word “thence” to indicate the ending of one course and preparation for the beginning of the next.
- ☐ ☐ 15. When identifying an adjoiner’s property line, include the line number (first line, second line), the deed’s date, the recording reference (deed clerk, liber and folio), and the grantor and grantee.
- ☐ ☐ 16. When referencing an SHA plat for the first time, use the following phrasing: “... State of Maryland, Department of Transportation, State Highway Administration, State Roads Commission Plat No. 56957, filed for record with and electronically recorded by the Maryland State Archives, herein after referred to as SHA Plat No. 56957 ...”

- ☐ ☐ 17. When referencing an SRC plat for the first time, use the following phrasing: "... State Roads Commission of Maryland Plat No. 8375, filed for record with and electronically recorded by the Maryland State Archives, herein after referred to as SRC Plat No. 8375 ..."
- ☐ ☐ 18. When referencing a lettered plat for the first time, use the following phrasing: "... State Roads Commission of Maryland Lettered Plat CGH, filed for record with and electronically recorded by the Maryland State Archives, herein after referred to as Lettered Plat CGH ..."
- ☐ ☐ 19. If the plat has been revised, add the revision date as follows:  
"... SHA Plat No. 56957, revised 12-5-1968, ..."

### **CONTAINING**

- ☐ ☐ 20. State the described land area. It should match what is in the Header.
- ☐ ☐ 21. Identify the amount of square feet, rounded to the nearest foot, and the acreage, rounded to the nearest 0.001 acre. The acreage is identified either as a fraction of an acre of land, more or less, or as acres of land, more or less, e.g. 0.652 of an acre of land... or 1.652 acres of land...
- ☐ ☐ 22. Land area may be qualified as, for example, "Fee Simple Area", and the item number and plat number may be cited under this header as applicable.

### **TOGETHER WITH**

- ☐ ☐ 23. State any appurtenances, easements, rights, or privileges that pertain to the property being described.

### **SUBJECT TO**

- ☐ ☐ 24. State any encumbrances to the property being described, e.g. right to discharge, perpetual easement, through highway

### **BEING CLAUSE - PLATS**

- ☐ ☐ 25. This clause will begin with "BEING ALL OR A PORTION OF THE LAND" or "BEING ALL THE LAND" depending on the situation.

- ☐ ☐ 26. Identify and list all the SRC, SHA, and record/subdivision plats that either are cited in the description or encompass any of the property being acquired or conveyed.
- ☐ ☐ 27. Confirm and verify the plat numbers, revision dates, and recordation status.

### **BEING CLAUSE - DEEDS**

- ☐ ☐ 28. This clause will begin with “**BEING ALL OR A PORTION OF THE LAND**” or “**BEING ALL THE LAND**” depending on the situation.
- ☐ ☐ 29. Standard language for citing a deed is as follows:  
“BEING ALL OR A PORTION OF THE LAND, which, by a deed (or inquisition) dated (or witnessed) November 11, 1960 and recorded among the Land Records of Harford County, Maryland in Liber H.D.C 4567, Folio 123, was conveyed by Robert Star (grantor) to the State of Maryland to the use of the State Roads Commission of Maryland (grantee).”
- ☐ ☐ 30. If there are multiple deeds to list, the following format may be utilized:  
“BEING ALL OR A PORTION OF THE LAND, which, by the following deeds recorded among the Land Records of Harford County, Maryland, were conveyed to the State of Maryland to the use of the State Highway Administration of the Department of Transportation, viz:
- dated June 14, 1989, recorded in Liber C.M.P. 2020, Folio 706, and conveyed by Benjamin Isaacson; and
  - dated September 28, 1989, recorded in Liber C.M.P. 2082, Folio 246, and conveyed by The Board of Education of Howard County.

### **CERTIFICATION**

- ☐ ☐ 31. The following certification shall be inserted at the end of the description.
- “The above metes and bounds description and surveying work associated with its preparation has been prepared under my responsible charge and is in compliance under COMAR Regulations Title 09.13.06. My License expires on [insert date here].”
- ☐ ☐ 32. Just underneath the certification statement, the Surveyor of Record shall apply their stamp and original signature. Customarily, the date that the description is signed is also indicated here.

## **COMMENTS**

**THE GRANTORS DO HEREBY GRANT, CONVEY AND QUITCLAIM** unto the County of Anne Arundel, Maryland, all right, title and interest in and to a part of the roadbed and right of way of MD 3 (Veterans Highway, also known as East Frontage Road), variable width, together with the appurtenances thereto belonging or in anywise appertaining, for 22,282 linear feet or 4.22 miles, more or less. The centerline of which is described as follows:

**BEGINNING FOR THE SAME** at a point formed by the intersection of the centerline of MD 3 (Veterans Highway) and the centerline of MD 178 (General Highway) at station 517+21 of the baseline of right of way of MD 3 (Veterans Highway) as delineated on State Roads Commission of Maryland Plat No. 16651, thence running with and binding on said baseline (1) North 50 degrees 17 minutes 52 seconds East 391.08 feet to Point of Curvature (P.C.) station 521+12.08, thence (2) Northeasterly by a line curving to the left, having a radius of 1145.92 feet and a curve angle of 25 degrees 31 minutes 25 seconds, for an arc distance of 510.47 feet to the Point of Tangency (P.T.) station 526+22.55, thence crossing State Roads Commission of Maryland Plat No. 16654, (3) North 24 degrees 46 minutes 27 seconds East 286.87 feet to equality station 529+09.42 (back) and 529+04.46 (ahead), thence (4) North 24 degrees 46 minutes 27 seconds East 388.04 feet to P.C. station 532+92.50, thence crossing State Roads Commission of Maryland Plat No. 16655, (5) Northeasterly by a line curving to the left, having a radius of 1718.87 feet and a curve angle of 04 degrees 13 minutes 22 seconds, for an arc distance of 1266.83 to the P.T. station 545+59.34,

Millrace Property Owners Association, Inc. to the State Roads Commission of Maryland; which, by a deed dated September 15, 1989 and recorded among the Land Records of Anne Arundel County, Maryland in Liber H.E.S. 5018, Folio 354 was conveyed by George W. Stone to the State Roads Commission of Maryland; which, by a deed dated October 8, 1987 and recorded among the Land Records of Anne Arundel County, Maryland in Liber H.E.S. 4482, Folio 887 was conveyed by Nicholas E. Plakotoris et al. to the State Roads Commission of Maryland; which, by a deed dated August 7, 1986 and recorded among the Land Records of Anne Arundel County, Maryland in Liber E.A.C. 4145, Folio 635 was conveyed by Charles F. Solomon and Genevieve Solomon to the State Roads Commission of Maryland; which, by an inquisition witnessed April 6, 1988 and recorded among the Land Records of Anne Arundel County, Maryland in Liber H.E.S. 4623, Folio 715 was conveyed by Sharon Mae Pumphrey to the State Roads Commission of Maryland; which, by a deed dated November 10, 1987 and recorded among the Land Records of Anne Arundel County, Maryland in Liber H.E.S. 4562, Folio 361 was conveyed by Anne Arundel County Maryland to the State Roads Commission of Maryland; and which, by a deed dated June 13, 1989 and recorded among the Land Records of Anne Arundel County, Maryland in Liber H.E.S. 4876, Folio 382 was conveyed by Jerome Steller et al. to the State Roads Commission of Maryland.





**ROAD SEGMENT  
TO BE CONVEYED BY  
THE STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION  
STATE ROADS COMMISSION OF THE STATE HIGHWAY ADMINISTRATION  
TO  
CITY OF GAITHERSBURG, MARYLAND**

**Road Transfer Name:** MD 117 (W Diamond Avenue), MD 117 (Olde Towne Ave)

**Right of Way Project No.:** M 733-301-371

**Right of Way Project:** MD. Rte. 355 – From South Summit Avenue to Chestnut Street

**Item No.:** 67814, 67815, 67850, 67851, 72988

**Road Transfer Item No.:** 104326

**Total Fee Area:** 55,305 square feet or 1.270 acres, more or less

.....

**THE GRANTORS DO HEREBY GRANT, CONVEY AND QUITCLAIM** unto City of Gaithersburg, Maryland, all right, title and interest in and to the roadbed and right of way of MD 117 (W Diamond Avenue) and MD 117 (Olde Towne Ave), together with the appurtenances thereto belonging or in anywise appertaining.

**BEING** all those pieces or parcels of land as shown and delineated on the State of Maryland, Department of Transportation, State Highway Administration, State Roads Commission Plat No. 61153, which has been filed for record with and electronically recorded by the Maryland State Archives.

**TOGETHER WITH** the appurtenances thereto belonging or in anywise appertaining and any road dedication areas of record.

conveyed by James A. Federline, Inc. to the State of Maryland to the use of the  
State Roads Commission of Maryland.



# **MDOT - SHA - OHD - PSD WORKMAP CHECKLIST**

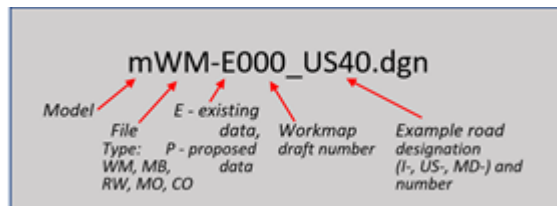
All workmaps should recognize that a Surveyor follows in the footsteps of the Surveyors that came before them. Make sure the next Surveyor that uses the workmap can follow YOUR footsteps.

The undersigned certify that they have reviewed the submitted workmap for compliance with this checklist.

File Name: \_\_\_\_\_ Drafter: \_\_\_\_\_

Surveyor of Record: \_\_\_\_\_

## **FILE STRUCTURE**



- ☐ ☐ 1. Workmap File
  - Contains all boundary information either active or referenced
  
- ☐ ☐ 2. Metes & Bounds File
  - Contains only field-located monumentation and property evidence found
  
- ☐ ☐ 3. Right of Way File
  - Contains existing right of way lines, state highway easements, and base lines
  
- ☐ ☐ 4. Mosaic File
  - Contains all deed and plat plots in addition to the initial plots of SHA plats and base lines
  - See Chapter III of Plat Manuel for additional requirements
  
- ☐ ☐ 5. Control File
  - Contains traverse points and fly points

## **GENERAL ITEMS TO BE INCLUDED IN A WORKMAP FILE**

- ☐ ☐ 6. Point numbers for deed parcels, right of way lines, base lines, and metes and bounds property monumentation should be included in the workmap.
  - 1-2999 for existing points
  - 3001-3499 for traverse points
  - 3501-3999 for existing monumentation
  - 4001-4999 for deed points
  - 5001-5999 for base line points
  - 6001-6999 for existing right of way points
  - 7001-7999 for existing easement points
  - 8001-8999 for proposed right of way points
  - 9001-9999 for proposed easement points
  
- ☐ ☐ 7. Graphic scale
  
- ☐ ☐ 8. North arrow (also indicating coordinate system being used)
  
- ☐ ☐ 9. Title Block
  - Project title and FMIS number
  - If completed by a consulting firm
    - Contract number
    - Task number
    - Name and address
  - Date field surveys were completed
  - Date workmap was completed
  - Name(s) of people that worked on or verified the workmap
  - Ics, alg, or other files used to plot parcels, points, right of way, or base lines that were submitted
  
- ☐ ☐ 10. Notes. These should include:
  - Background on work performed to establish all lines of possession, including but not limited to base lines, right of way lines, lines of division, prescriptive lines, easement lines, etc. Indicate which points were held, held for line, and found but not held.
  - If there were any unforeseen problems or unresolved issues, what were they and what was your approach to solve it.
  - Include an explanation on how the base line was established. Include items, such as what references were held and the survey books that they were in. If no base line existed, state how the base line was created.

## **BASE LINES OF RIGHT OF WAY**

- ☐ ☐ 11. All base lines shall be shown with the following attributes:
  - Level: PLA-BLIN
  - Weight: 3
  - Style: 0
  - Color: 4
  
- ☐ ☐ 12. Base line should include:
  - Stationing (as shown on the re-established base line or for a new base line)
  - Curve geometry information
  - Notes stating PCs, PTs, POTs, etc.
  - Bearing of the tangent of the base line rounded to the nearest tenth of a second
  - At least 3 points on the base line that show coordinates
  - Route number and designation (MD-, US-, I-) with the road's name in parenthesis. If is a county road just include name.
  - SHA plat numbers used to re-establish the base line
  - What evidence was held to re-establish the base line
  - SHA book and page number used to re-establish the base line

## **LINE OF DIVISION**

- ☐ ☐ 13. All lines of division shall be shown with the following attributes:
  - Level: PLA-PROP-LINE
  - Weight: 3
  - Style: "Line of Division" (Check that the line style is to scale selected.)
  - Color: 0
  
- ☐ ☐ 14. All parcels shall include the following:
  - Tax map and parcel number
  - Owner name (as spelled out in the deed and not just from the SDAT sheet)
  - Deed clerk initials, liber, and folio
  - Name of record plat, plat book number, and page with lot number
  
- ☐ ☐ 15. Bearing and distance are included with all lines of division shown.
  
- ☐ ☐ 16. Lines should be noted as lines of division.






## **RIGHT OF WAY LINES**

- ☐ ☐ 17. All existing right of way lines shall have the following attributes:
  - Level: PLA-RWAY-LINE\_E
  - Weight: 4
  - Style: "Line of Division" (Check that the line style is to scale selected.)
  - Color: 13
- ☐ ☐ 18. All right of way lines shall have a note to indicate if it is an existing right of way line or an existing right of way line of through highway.
- ☐ ☐ 19. If part of the line is a curve and is not concentric with the current base line of right of way, its radius shall be shown at both the start and end of the curve.
- ☐ ☐ 20. Label all non-tangential curves.


## **EASEMENT LINES**

- ☐ ☐ 21. All Existing Easement Lines
  - Level: PLA-ESMT-LINE\_E
  - Weight: 3
  - Style: 0
  - Color: 11
- ☐ ☐ 22. All Easements are labeled with type of easement and deed or plat reference cited.

## **PROPERTY CORNERS TO BE SHOWN ON WORKMAP**

- ☐ ☐ 23. All property monuments shown on a workmap shall have a note indicating if it was called for, found, held, or held for line.
- ☐ ☐ 24. Confirm property monumentation has the correct symbol to show what type of physical object was found and located in the field (e.g. concrete monument , stone , angle iron , iron pipe , rebar and cap , etc.).
- ☐ ☐ 25. All property monuments are clearly labeled (e.g. iron pipe, 4"x4" concrete monument, rebar and cap stamped with "License # 12345").
- ☐ ☐ 26. Photos of property corners must be provided, with associated point numbers.

## **TRAVERSE INFORMATION**

- ☐ ☐ 27. Traverse information can be found in the mCO file.
- ☐ ☐ 28. All traverse points should be marked with the  and have the following information:
  - Point ID/Name
  - Type (rebar and cap, concrete monument, PK, spike nail, etc.)
  - SHA book and page reference (if applicable)
  - Northing
  - Easting

**COMMENTS:** Use this area to detail special considerations for non-compliance.