

SECTION II

S P E C I F I C A T I O N S

The Improvements covered by these plans are based on the Michigan Department of Transportation Local Agency Program guidelines for Geometrics (3R) dated August 28, 2008. Except where otherwise indicated on these plans or in the Proposal and Supplemental Specifications contained therein, all materials and workmanship shall be in accordance with the Michigan Department of Transportation Standard Specifications for Construction, 2012 version and the Michigan Manual of Uniform Traffic Control Devices, 2009 edition.

SECTION III

**DRAWINGS AND
SPECIAL PROVISIONS**

**CITY OF DETROIT
SPECIAL PROVISION
FOR
MAINTAINING TRAFFIC**

1 OF 5

DET: UP
JJR: BPC

Revised: 05-18-2012
Revised: 04-25-2011

GENERAL REQUIREMENTS

Traffic shall be maintained throughout the project in accordance with 2012 MDOT Standard Specifications for construction, including any supplemental specifications, and as herein specified. All traffic control devices shall conform to the 2011 Revised Edition of the Michigan Manual of Uniform Traffic Control Devices.

City of Detroit maintenance crews and /or Contract Maintenance Agencies may perform maintenance work within or adjacent to the Construction Influence Area (CIA). The Maintenance Division of City of Detroit and or Contract Maintenance Agency will coordinate their operations with the Supervising Engineer to minimize the interference to the Contractor. No additional payment will be made to the Contractor for the joint use of the traffic control items.

MAINTENANCE OF TRAFFIC

- Walks, driveways, alleys and entrances to buildings shall not be blocked.
- The required number of lanes shall be maintained by plating of pavement.
- The paved surface shall be free of stored equipment, excavated material, etc. during specified hours.
- Protection and temporary crossings shall be provided for pedestrians at all crossings.
- Protection and temporary driveway access to residents and businesses shall be provided and maintained as directed by the Engineer.
- The Contractor shall notify local businesses a minimum of 48 hours prior to the implementation of any lane closures, weekend closures and major traffic shifts.
- The Contractor shall notify the Engineer, the state and the local police and fire department patrolling the area three (3) business days prior to making any lane closures or traffic switches.
- The Contractor must coordinate his operations with contractors performing work on other projects within or adjacent to the construction influence area.
- Steel plates, 3/4 inch thick, of sufficient size, shall be furnished and installed by the contractor to cover paving cuts and to provide crossings over trenches. No separate compensation will be made to furnish, install, maintain and remove these Steel Plates when no longer needed. It is the Contractor responsibility to pay for this item.
- Plates shall be bedded in Cold Patch so as to avoid rocking and the noise resulting there from, and shall be firmly anchored by spiking into the existing pavement.
- Approved HMA material, shall be used at the ends of the plates to eliminate bumps in traffic lanes. It is the Contractor's responsibility to pay for the approved HMA material.
- The spikes shall have a minimum length of 3 inches and shall be driven not closer than 12 inches from the edge of a trench up to 3 feet deep or 2 feet from the edge of a trench greater than 3 feet deep.

DET: MCS
JJR: BPC

Revised: 04-14-2010
Revised: 04-25-2011

- For trenches wider than 4 feet, the Contractor shall submit a method of bridging to the Engineer for approval. All bridging shall be of a design that will satisfactorily carry HS-20 truck loading across the opening smoothly, safely, and without undue noise.

SIGNING AND TRAFFIC CONTROL

The Contractor shall furnish and install all signing necessary for the maintenance of traffic. Traffic control devices shall conform to the Michigan Manual of Uniform Traffic Control Devices, 2011 Edition, Part VI, Construction and Maintenance; the Michigan Department of Transportation Maintaining Traffic Safety Typical Standards: M0020a, M0040a, M0140a, M0240a, PMC22e, WZD-100-A and WZD-125-E; and/or the City of Detroit, Department of Public Works Standards on Maintenance and Utility Signing as applicable. The listed Traffic Typical Standards are most frequently used and it may be necessary to utilize other Traffic Typical as applicable.

Distances between sign locations will vary depending on the lengths of the City blocks in advance of the job site. Other traffic signing and barricading requirements for this project are contained in the proposal.

The Contractor may relocate signs and other portable barricades only after coordinating with representatives of the Traffic Engineering Division of the Department of Public Works.

The Contractor may purchase signs from the City of Detroit Sign Shop if desired or may obtain signs from other sources. If signs are requested from the City of Detroit, a letter of request must first be sent to the Operations Division of the City of Detroit.

CONSTRUCTION INFLUENCE AREA (CIA)

The CIA shall include the area within the right-of-way of the street or streets listed in the contract title and/or the cross streets within the limits of the construction staging.

STREET	FROM	TO
Schoolcraft Mt. Elliot	Grand River Seven Mile	Wyoming Eight Mile

The Contractor shall coordinate his operations with Contractors performing work on other projects within or adjacent to the Construction Influence Area (CIA).

TIME RESTRICTIONS

Maintaining traffic requirements and hourly restrictions are subject to change by the engineer.

DET: MCS
JJR: BPC

Revised: 04-14-2010
Revised: 04-25-2011

No work shall be performed or lane closures allowed during the Memorial Day, July 4th, or Labor Day holiday periods, as defined by the Engineer. The contractor shall coordinate their work schedule around special events that take place in local communities in accordance with the Engineer. The contractor shall be responsible to contact the Supervising Engineer to acquire specific dates and locations for these events.

Other special events that may affect lane closures, as defined by the Engineer, are as follows:

- Downtown Hoe Down
- Freedom Festival
- Annual Detroit Electronic Music Festival
- Chrysler Jeep Detroit APBA Cup
- African World Festival
- Ford Detroit International Jazz Festival
- Ford Field Special Events and Home Games
- Comerica Park Special Events and Home Games
- JLA Special Events and Home Games
- Free Press Marathon

Work shall be suspended by the Engineer at any time traffic is being unduly hampered or delayed. In general, traffic is expected to be unduly hampered from 7:00 a.m. to 9:00 a.m. and from 4:00 p.m. to 6:00 p.m. weekdays. These hours may be adjusted by the Engineer.

TRUCK HAUL ROUTES

Truck haul routes selected by the Contractor must be submitted to the Detroit Department of Public Works for approval prior to the start of construction and are subject to regulations of the department.

BARRICADES

Plastic drums, High Intensity, and Barricade, Type III, High Intensity, Double Sided, Lighted necessary for traffic control and public safety shall be furnished and erected by the Contractor.

WARNING LIGHTS

Battery operated warning flashers shall be used on all barricades in accordance with Michigan Department of Transportation Michigan Manual of Uniform Traffic Control Devices, 2011 Edition and any recent changes and to special provision regarding battery operated warning lights

DET: MCS
JJR: BPC

Revised: 04-14-2010
Revised: 04-25-2011

STAGE CONSTRUCTION

The traffic control required by this Special Provision for work on various Streets in the contract and adjacent roadways is based on the MMUTCD. At the discretion of the Engineer, the Contractor may be requested to conduct construction activities in certain segments of the project at such times that coordinates with adjacent property owner uses and activities. The Contractor shall submit for review and approval by the Engineer a sequence of operation/staging plans to complete the work by the specified completion date. The adjustments or changes in the staging of construction to accommodate property owners shall not be paid for separately and shall be included in the overall project cost.

- Traffic shall be maintained using attached traffic control typical.
- Pedestrians Traffic shall be maintained using MMUTCD details shown in figures 6H-28 & 6H-28.

CLEANING ADJACENT STREETS AND SIDEWALKS

Dirt, mud, construction materials or other debris deposited on public sidewalks or streets as the result of spilling, tracking by the wheels of trucks or construction equipment or by other actions of the Contractor, his employees or subcontractors shall be immediately removed by the Contractor. Failure to do so is a violation of City Ordinances punishable by fines and/or imprisonment.

Failure to comply with all stipulations of the above traffic specifications will be cause for complete shutdown of the project.

In the event of an emergency, these restrictions are subject to change if traffic conditions indicate such a necessity. Traffic specifications are to be with the work crews at all times.

Temporary "No Parking" signs shall be placed in all parking areas when necessary to prohibit parking during construction activities. The "No Parking" signs shall be placed in all parking areas at least 24 hours and not more than 48 hours prior to construction activities.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Maintaining Traffic will be measured and paid for at the contract unit price for the contract pay items.

Payment for providing and maintaining driveway access and pedestrians crossing, temporary No Parking Signs, ¾ inch steel plates, plates bedding, spikes will not be paid separately. Payment for these items of work not paid for separately and/or other items are included in the total cost of the project.

DET: MCS
 JJR: BPC

Revised: 04-14-2010
 Revised: 04-25-2011

Any equipment required for nighttime operations shall be included in the cost of the work items being placed.

Contract Item (Pay Item)	Pay Unit
Lighted Arrow, Type C, Furn	Each
Lighted Arrow, Type C, Oper	Each
Plastic Drum, High Intensity, Furn	Each
Plastic Drum, High Intensity, Oper	Each
Minor Traf Devices	Lump Sum
Sign Type B, Temp, Prismatic, Furn	Square Foot
Sign Type B, Temp, Prismatic, Oper	Square Foot
Pavt Mrkg, Longit, 6 inches or Less Width, Rem	Foot
Traffic Regulator Control	LS
Mobile Attenuator	Ea

MINIMUM MERGING TAPER LENGTH "L" (FEET)

OFFSET FEET	POSTED SPEED LIMIT, MPH (PRIOR TO WORK AREA)									
	25	30	35	40	45	50	55	60	65	70
1	10	15	20	27	45	50	55	60	65	70
2	21	30	41	53	90	100	110	120	130	140
3	31	45	61	80	135	150	165	180	195	210
4	42	60	82	107	180	200	220	240	260	280
5	52	75	102	133	225	250	275	300	325	350
6	63	90	123	160	270	300	330	360	390	420
7	73	105	143	187	315	350	385	420	455	490
8	83	120	163	213	360	400	440	480	520	560
9	94	135	184	240	405	450	495	540	585	630
10	104	150	204	267	450	500	550	600	650	700
11	115	165	225	293	495	550	605	660	715	770
12	125	180	245	320	540	600	660	720	780	840
13	135	195	266	347	585	650	715	780	845	910
14	146	210	286	374	630	700	770	840	910	980
15	157	225	307	400	675	750	825	900	975	1050

TAPER LENGTH "L" IN FEET

THE FORMULAS FOR THE MINIMUM LENGTH OF A MERGING TAPER IN DERIVING THE "L" VALUES SHOWN IN THE ABOVE TABLES ARE AS FOLLOWS:

"L" = $\frac{W \times S^2}{60}$ WHERE POSTED SPEED PRIOR TO THE WORK AREA IS 40 MPH OR LESS

"L" = S x W WHERE POSTED SPEED PRIOR TO THE WORK AREA IS 45 MPH OR GREATER

L = MINIMUM LENGTH OF MERGING TAPER

S = POSTED SPEED LIMIT IN MPH PRIOR TO WORK AREA

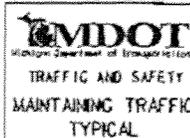
W = WIDTH OF OFFSET

TYPES OF TAPERS

- UPSTREAM TAPERS
- MERGING TAPER
- SHIFTING TAPER
- SHOULDER TAPER
- TWO-WAY TRAFFIC TAPER
- DOWNSTREAM TAPERS (USE IS OPTIONAL)

TAPER LENGTH

- L - MINIMUM
- 1/2 L - MINIMUM
- 1/3 L - MINIMUM
- 100' - MAXIMUM
- 100' - MINIMUM (PER LANE)



TRAFFIC AND SAFETY
MAINTAINING TRAFFIC
TYPICAL

TABLES FOR "L", "D" AND "B" VALUES

DRAWN BY: CON:AE:djt	JUNE 2006	W0020a	SHEET 1 OF 2
CHECKED BY: BLM	PLAN DATE:		
FILE: K:\BCN\FSR\STDS\ENCL\SH\WHTTRF\W0020a.dgn		REV.	08/21/2006

DISTANCE BETWEEN TRAFFIC CONTROL DEVICES "D"
AND LENGTH OF LONGITUDINAL BUFFER SPACE ON
"WHERE WORKERS PRESENT" SEQUENCES

"D" DISTANCES	POSTED SPEED LIMIT, MPH (PRIOR TO WORK AREA)									
	25	30	35	40	45	50	55	60	65	70
D (FEET)	250	300	350	400	450	500	550	600	650	700

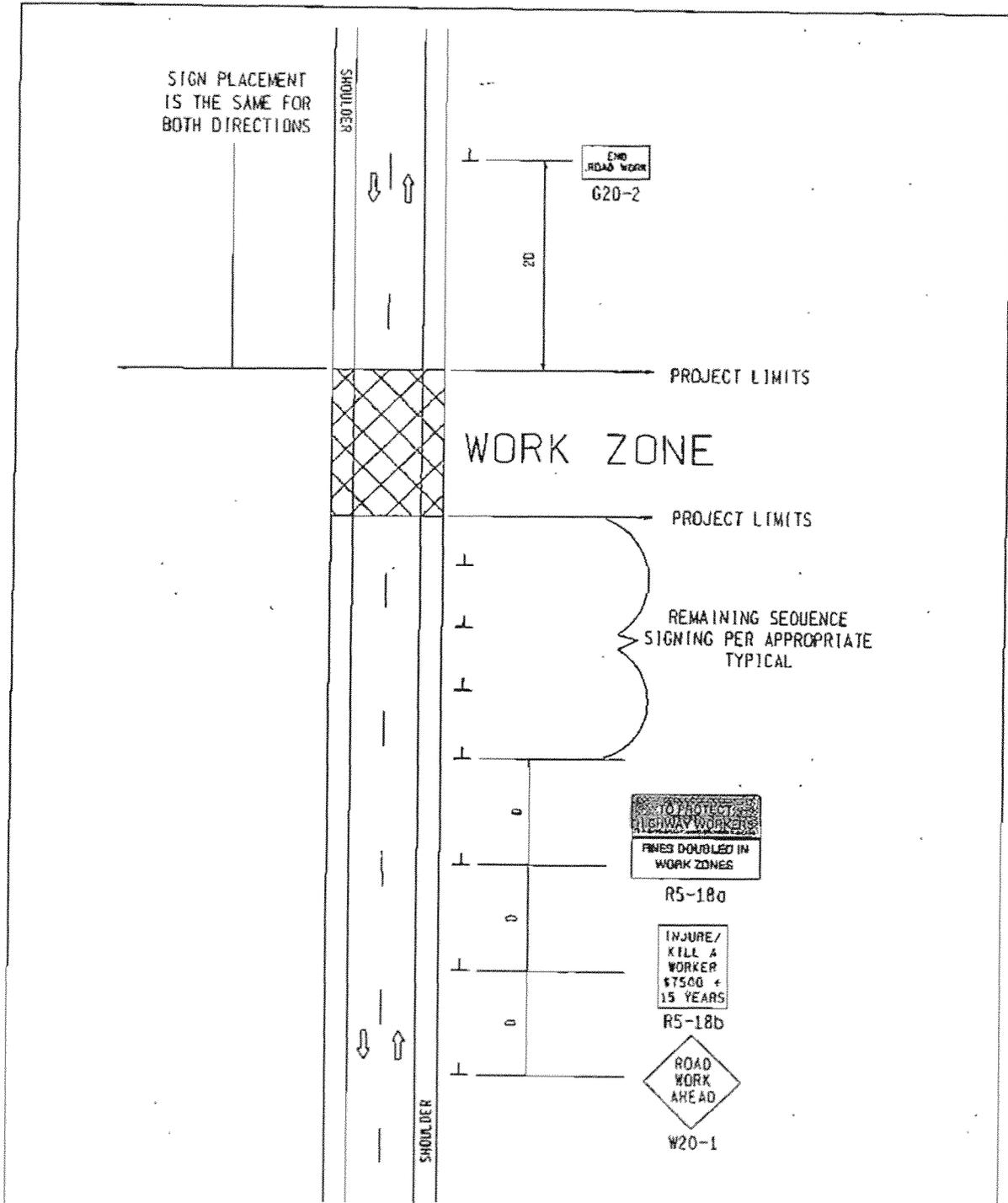
GUIDELINES FOR LENGTH OF
LONGITUDINAL BUFFER SPACE "B"

SPEED* MPH	LENGTH FEET
20	33
25	50
30	83
35	132
40	181
45	230
50	279
55	329
60	411
65	476
70	542

* POSTED SPEED, OFF PEAK 85TH PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED

1 BASED UPON AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) BRAKING DISTANCE PORTION OF STOPPING SIGHT DISTANCE FOR WET AND LEVEL PAVEMENTS (A POLICY ON GEOMETRIC DESIGN OF HIGHWAY AND STREETS), AASHTO. THIS AASHTO DOCUMENT ALSO RECOMMENDS ADJUSTMENTS FOR THE EFFECT OF GRADE ON STOPPING AND VARIATION FOR TRUCKS.

 Michigan Department of Transportation TRAFFIC AND SAFETY MAINTAINING TRAFFIC TYPICAL	TABLES FOR "L", "D" AND "B" VALUES		
	DRAWN BY: COH:AC:dif CHECKED BY: DMW FILE: X:/004/TSR/STDS/ENGLISH/INTTRF/MDD20a.dgn	JUNE 2006 PLAN DATE:	M0020a
			REV. 06/21/2006



SIGN = 68 ft2 - TYPE B
 FOR ONE DIRECTION OF TRAFFIC
 W20-1 QUANTITY INCLUDED
 WITH APPROPRIATE TYPICAL
 FOR SEQUENCE SIGNING

MDOT
 Michigan Department of Transportation
 TRAFFIC AND SAFETY
 MAINTAINING TRAFFIC
 TYPICAL

TYPICAL ADVANCE SIGNING TREATMENT FOR LONG, INTERMEDIATE AND SHORT TERM STATIONARY WORK ZONE OPERATIONS OF LESS THAN TWO MILES IN LENGTH WHERE TRAFFIC CONTROL DEVICES MAY REMAIN AT END OF WORK DAY ON AN UNDIVIDED TWO-WAY ROADWAY

DRAWN BY: CDH:AE:df	JUNE 2006	M0040a	SHEET 1 OF 2
CHECKED BY: BMM	PLAN DATE:		
FILE: PW RD/TS/typical/Signs/MT NON FWY/M0040a.dgn REV. 08/15/2007			

NOT TO SCALE

NOTES

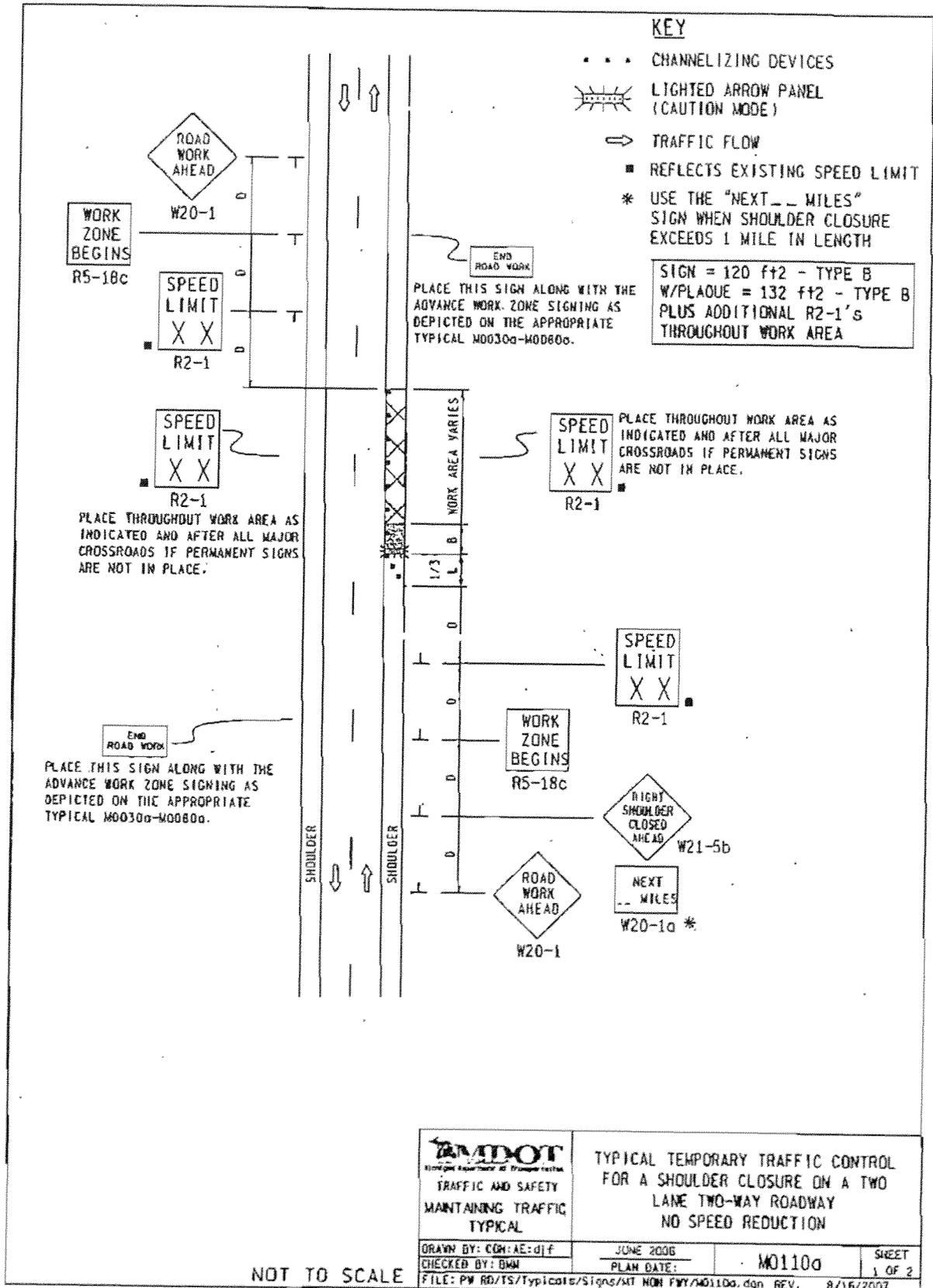
- 30. THE APPROPRIATE ADVANCE SIGNING SEQUENCE(S), (M0030d THROUGH M0080d) SHALL BE USED ON ALL PROJECTS.
- 32. THESE SIGNS SHALL BE LEFT IN PLACE AT THEIR PRESCRIBED LOCATIONS FOR THE DURATION OF THE PROJECT AND UNTIL ALL TEMPORARY TRAFFIC CONTROL HAS BEEN REMOVED.
- 35. THESE SIGNS ARE INTENDED TO BE USED WITHIN THE LIMITS OF THE TEMPORARY SEQUENCE SIGNING AS IS SHOWN ON 1 OF 2. THESE SIGNS ARE NOT TO BE INTERMINGLED WITH ANY OTHER TEMPORARY SEQUENCE SIGNING EXCEPT AS SHOWN.

SIGN SIZES

G20-2	-	48" x 24"
R5-1Bd	-	96" x 60"
R5-1Bd	-	48" x 60"
W20-1	-	48" x 48"

 Michigan Department of Transportation TRAFFIC AND SAFETY MAINTAINING TRAFFIC TYPICAL	TYPICAL ADVANCE SIGNING TREATMENT FOR LONG- INTERMEDIATE AND SHORT TERM STATIONARY WORK ZONE OPERATIONS OF LESS THAN TWO MILES IN LENGTH WHERE TRAFFIC CONTROL DEVICES MAY REMAIN AT END OF WORK DAY ON AN UNDIVIDED TWO-WAY ROADWAY		
	DRAWN BY: CGM:AE:djf CHECKED BY: BMM	JUNE 2006 PLAN DATE:	M0040d
FILE: PW RD/TS/Typicals/Signs/NT HDN FWY/M0040d.dgn REV. 08/15/2007			

NOT TO SCALE



KEY

- • • CHANNELIZING DEVICES
- LIGHTED ARROW PANEL (CAUTION MODE)
- TRAFFIC FLOW
- REFLECTS EXISTING SPEED LIMIT
- * USE THE "NEXT -- MILES" SIGN WHEN SHOULDER CLOSURE EXCEEDS 1 MILE IN LENGTH

SIGN = 120 ft x 2 - TYPE B
 W/PLAQUE = 132 ft x 2 - TYPE B
 PLUS ADDITIONAL R2-1's THROUGHOUT WORK AREA

END ROAD WORK
 PLACE THIS SIGN ALONG WITH THE ADVANCE WORK ZONE SIGNING AS DEPICTED ON THE APPROPRIATE TYPICAL M0030a-M0080b.

SPEED LIMIT XX
 R2-1
 PLACE THROUGHOUT WORK AREA AS INDICATED AND AFTER ALL MAJOR CROSSROADS IF PERMANENT SIGNS ARE NOT IN PLACE.

SPEED LIMIT XX
 R2-1
 PLACE THROUGHOUT WORK AREA AS INDICATED AND AFTER ALL MAJOR CROSSROADS IF PERMANENT SIGNS ARE NOT IN PLACE.

END ROAD WORK
 PLACE THIS SIGN ALONG WITH THE ADVANCE WORK ZONE SIGNING AS DEPICTED ON THE APPROPRIATE TYPICAL M0030a-M0080b.

<p>MDOT Michigan Department of Transportation TRAFFIC AND SAFETY MAINTAINING TRAFFIC TYPICAL</p>	TYPICAL TEMPORARY TRAFFIC CONTROL FOR A SHOULDER CLOSURE ON A TWO LANE TWO-WAY ROADWAY NO SPEED REDUCTION	
	DRAWN BY: CGH:AE:djf CHECKED BY: BMM	JUNE 2006 PLAN DATE:
FILE: PW RD/TS/Typical/Signs/MT NON FWY/M0110a.dgn REV. 8/16/2007		

NOT TO SCALE

NOTES

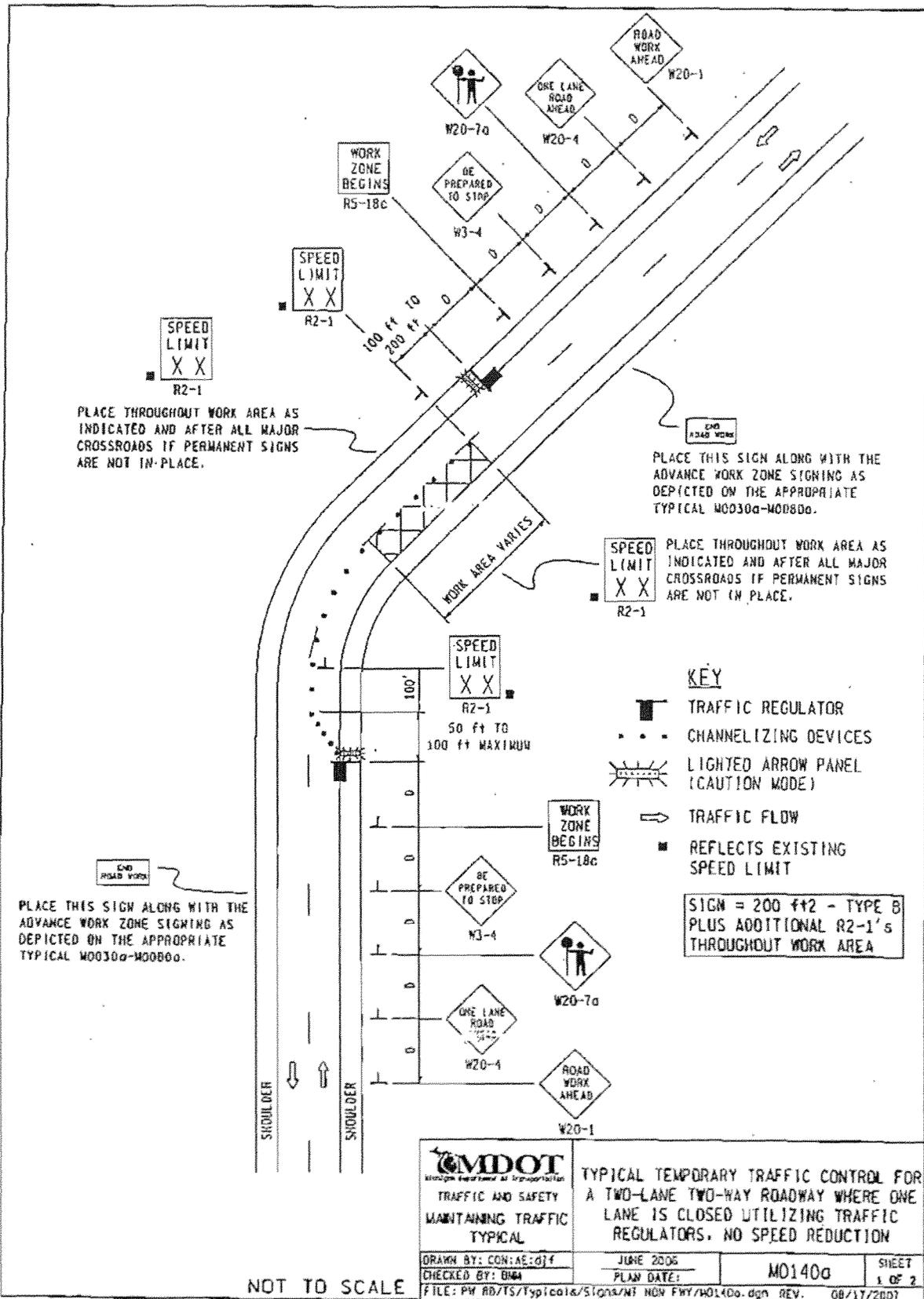
1. D = DISTANCE BETWEEN TRAFFIC CONTROL DEVICES
 1/3 L = MINIMUM LENGTH OF TAPER
 B = LENGTH OF LONGITUDINAL BUFFER
 SEE M0020a FOR "D," "L," AND "B" VALUES
2. ALL NON-APPLICABLE SIGNING WITHIN THE CIA SHALL BE MODIFIED TO FIT CONDITIONS, COVERED OR REMOVED.
3. DISTANCES BETWEEN SIGNS, THE VALUES FOR WHICH ARE SHOWN IN TABLE D, ARE APPROXIMATE AND MAY NEED ADJUSTING AS DIRECTED BY THE ENGINEER.
- 3A. THE "WORK ZONE BEGINS" (R5-10c) SIGN SHALL BE USED ONLY IN THE INITIAL SIGNING SEQUENCE IN THE WORK ZONE. SUBSEQUENT SEQUENCES IN THE SAME WORK ZONE SHALL OMIT THIS SIGN AND THE QUANTITIES SHALL BE ADJUSTED APPROPRIATELY.
- 4E. THE MAXIMUM RECOMMENDED DISTANCE(S) BETWEEN CHANNELIZING DEVICES SHOULD BE EQUAL IN FEET TO THE POSTED SPEED IN MILES PER HOUR ON TAPER(S) AND TWICE THE POSTED SPEED IN THE PARALLEL AREA(S).
5. FOR OVERNIGHT CLOSURES, CHANNELIZING DEVICES SHALL BE LIGHTED PLASTIC DRUMS.
6. WHEN CALLED FOR IN THE FHWA ACCEPTANCE LETTER FOR THE SIGN SYSTEM SELECTED, THE TYPE A WARNING FLASHER, SHOWN ON THE WARNING SIGNS, SHALL BE POSITIONED ON THE SIDE OF THE SIGN NEAREST THE ROADWAY.
7. ALL TEMPORARY SIGNS, TYPE III BARRICADES, THEIR SUPPORT SYSTEMS AND LIGHTING REQUIREMENTS SHALL MEET MCHRP 350 CRASHWORTHY REQUIREMENTS STIPULATED IN THE 2005 EDITION OF THE MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION, THE STANDARD PLANS AND APPLICABLE SPECIAL PROVISIONS. ONLY DESIGNS AND MATERIALS APPROVED BY MDT WILL BE ALLOWED.
8. WHEN BUFFER AREAS ARE ESTABLISHED, THERE SHALL BE NO EQUIPMENT OR MATERIALS STORED OR WORK CONDUCTED IN THE BUFFER AREA.
- 29A. THE TYPE OF REFLECTIVE SHEETING USED FOR THE W20-1a PLAQUE SHALL BE THE SAME AS THE TYPE USED FOR THE PARENT SIGN.

SIGN SIZES

DIAMOND WARNING - 48" x 48"
 W20-1a PLAQUE - 48" x 36"
 R2-1 REGULATORY - 48" x 60"
 R5-10c REGULATORY - 48" x 48"

NOT TO SCALE

 MICHIGAN DEPARTMENT OF TRANSPORTATION TRAFFIC AND SAFETY MAINTAINING TRAFFIC TYPICAL	TYPICAL TEMPORARY TRAFFIC CONTROL FOR A SHOULDER CLOSURE ON A TWO LANE TWO-WAY ROADWAY NO SPEED REDUCTION	
	DRAWN BY: CDW:AE:djf CHECKED BY: GMI	JUNE 2006 PLAN DATE:
FILE: PW RD/TS/Typicals/Signs/MT NGN FW/M0110a.dgn REV. 8/16/2007		



PLACE THROUGHOUT WORK AREA AS INDICATED AND AFTER ALL MAJOR CROSSROADS IF PERMANENT SIGNS ARE NOT IN-PLACE.

PLACE THIS SIGN ALONG WITH THE ADVANCE WORK ZONE SIGNING AS DEPICTED ON THE APPROPRIATE TYPICAL M0030a-M0080a.

PLACE THROUGHOUT WORK AREA AS INDICATED AND AFTER ALL MAJOR CROSSROADS IF PERMANENT SIGNS ARE NOT IN PLACE.

PLACE THIS SIGN ALONG WITH THE ADVANCE WORK ZONE SIGNING AS DEPICTED ON THE APPROPRIATE TYPICAL M0030a-M0080a.

KEY

- TRAFFIC REGULATOR
- CHANNELIZING DEVICES
- LIGHTED ARROW PANEL (CAUTION MODE)
- TRAFFIC FLOW
- REFLECTS EXISTING SPEED LIMIT

SIGN = 200 ft x 2 - TYPE B PLUS ADDITIONAL R2-1's THROUGHOUT WORK AREA

 MICHIGAN DEPARTMENT OF TRANSPORTATION TRAFFIC AND SAFETY MAINTAINING TRAFFIC TYPICAL	TYPICAL TEMPORARY TRAFFIC CONTROL FOR A TWO-LANE TWO-WAY ROADWAY WHERE ONE LANE IS CLOSED UTILIZING TRAFFIC REGULATORS, NO SPEED REDUCTION		
	DRAWN BY: CON:AE:djf CHECKED BY: BMA	JUNE 2006 PLAN DATE:	M0140a

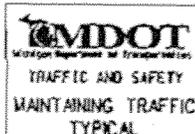
NOT TO SCALE

NOTES

- 1H. D = DISTANCE BETWEEN TRAFFIC CONTROL DEVICES AND LENGTH OF LONGITUDINAL BUFFERS
SEE M00200 FOR "D" VALUES.
2. ALL NON-APPLICABLE SIGNING WITHIN THE CIA SHALL BE MODIFIED TO FIT CONDITIONS, COVERED OR REMOVED.
3. DISTANCES BETWEEN SIGNS, THE VALUES FOR WHICH ARE SHOWN IN TABLE D, ARE APPROXIMATE AND MAY NEED ADJUSTING AS DIRECTED BY THE ENGINEER.
- 3A. THE "WORK ZONE BEGINS" (R5-18c) SIGN SHALL BE USED ONLY IN THE INITIAL SIGNING SEQUENCE IN THE WORK ZONE. SUBSEQUENT SEQUENCES IN THE SAME WORK ZONE SHALL OMIT THIS SIGN AND THE QUANTITIES SHALL BE ADJUSTED APPROPRIATELY.
- 4A. THE MAXIMUM RECOMMENDED DISTANCE(S) BETWEEN CHANNELIZING DEVICES IN THE TAPER AREA(S) SHOULD BE 15 FEET AND SHOULD BE EQUAL IN FEET TO TWICE THE POSTED SPEED IN MILES PER HOUR IN THE PARALLEL AREA(S).
5. FOR OVERNIGHT CLOSURES, CHANNELIZING DEVICES SHALL BE LIGHTED PLASTIC DRUMS.
6. WHEN CALLED FOR IN THE FHWA ACCEPTANCE LETTER FOR THE SIGN SYSTEM SELECTED, THE TYPE A WARNING FLASHER, SHOWN ON THE WARNING SIGNS, SHALL BE POSITIONED ON THE SIDE OF THE SIGN NEAREST THE ROADWAY.
7. ALL TEMPORARY SIGNS, TYPE III BARRICADES, THEIR SUPPORT SYSTEMS AND LIGHTING REQUIREMENTS SHALL MEET NCHRP 350 CRASHWORTHY REQUIREMENTS STIPULATED IN THE 2005 EDITION OF THE MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION, THE STANDARD PLANS AND APPLICABLE SPECIAL PROVISIONS. ONLY DESIGNS AND MATERIALS APPROVED BY MDOT WILL BE ALLOWED.
9. ALL TRAFFIC REGULATORS SHALL BE PROPERLY TRAINED AND SUPERVISED.
- 9A. IN ANY OPERATION INVOLVING MORE THAN ONE TRAFFIC REGULATOR, ONE PERSON SHOULD BE DESIGNATED AS HEAD TRAFFIC REGULATOR.
10. ALL TRAFFIC REGULATORS' CONDUCT, THEIR EQUIPMENT, AND TRAFFIC REGULATING PROCEDURES SHALL CONFORM TO THE CURRENT EDITION OF THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD) AND THE CURRENT EDITION OF THE MDOT HANDBOOK ENTITLED "TRAFFIC REGULATORS INSTRUCTION MANUAL."
11. WHEN TRAFFIC REGULATING IS ALLOWED DURING THE HOURS OF DARKNESS, APPROPRIATE LIGHTING SHALL BE PROVIDED TO SUFFICIENTLY ILLUMINATE THE TRAFFIC REGULATOR'S STATIONS.
- 12E. THE MAXIMUM DISTANCE BETWEEN THE TRAFFIC REGULATORS SHALL BE NO MORE THAN 2 MILES IN LENGTH UNLESS RESTRICTED FURTHER IN THE SPECIAL PROVISIONS FOR MAINTAINING TRAFFIC. ALL SEQUENCES OF MORE THAN 2 MILES IN LENGTH WILL REQUIRE WRITTEN PERMISSION FROM THE ENGINEER BEFORE PROCEEDING.
13. WHEN INTERSECTING ROADS OR SIGNIFICANT TRAFFIC GENERATORS (SHOPPING CENTERS, MOBILE HOME PARKS, ETC.) OCCUR WITHIN THE ONE-LANE TWO-WAY OPERATION, INTERMEDIATE TRAFFIC REGULATORS AND APPROPRIATE SIGNING SHALL BE PLACED AT THESE LOCATIONS.
14. ADDITIONAL SIGNING AND/OR ELONGATED SIGNING SEQUENCES SHOULD BE USED WHEN TRAFFIC VOLUMES ARE SIGNIFICANT ENOUGH TO CREATE BACKUPS BEYOND THE M3-4 SIGNS.
15. THE HAND HELD (PADDLER) SIGNS REQUIRED BY THE MMUTCD TO CONTROL TRAFFIC WILL BE PAID FOR AS PART OF FLAG CONTROL.
- 28E. THE TRAFFIC REGULATORS SHOULD BE POSITIONED AT OR NEAR THE SIDE OF THE ROAD SO THAT THEY ARE SEEN CLEARLY AT A MINIMUM DISTANCE OF 500 FEET. THIS MAY REQUIRE EXTENDING THE BEGINNING OF THE LANE CLOSURE TO OVERCOME VIEWING PROBLEMS CAUSED BY HILLS AND CURVES.

SIGN SIZES

DIAMOND WARNING - 48" x 48"
 R2-1 REGULATORY - 48" x 60"
 R5-18c REGULATORY - 48" x 48"



TYPICAL TEMPORARY TRAFFIC CONTROL FOR
 A TWO-LANE TWO-WAY ROADWAY WHERE ONE
 LANE IS CLOSED UTILIZING TRAFFIC
 REGULATORS. NO SPEED REDUCTION

DRAWN BY: CON:AE:BJF

JUNE 2006

CHECKED BY: BNA

PLAN DATE:

M0140a

SHEET
2 OF 2

NOT TO SCALE

FILE: PW RD/TS/Typicals/Signs/NT M0140a.dgn REV. 08/17/2001

NOTES

- 1H. D = DISTANCE BETWEEN TRAFFIC CONTROL DEVICES AND LENGTH OF LONGITUDINAL BUFFERS
SEE M00200 FOR "D" VALUES.
2. ALL NON-APPLICABLE SIGNING WITHIN THE CIA SHALL BE MODIFIED TO FIT CONDITIONS, COVERED OR REMOVED.
3. DISTANCES BETWEEN SIGNS, THE VALUES FOR WHICH ARE SHOWN IN TABLE D, ARE APPROXIMATE AND MAY NEED ADJUSTING AS DIRECTED BY THE ENGINEER.
- 3A. THE "WORK ZONE BEGINS" (RS-18c) SIGN SHALL BE USED ONLY IN THE INITIAL SIGNING SEQUENCE IN THE WORK ZONE. SUBSEQUENT SEQUENCES IN THE SAME WORK ZONE SHALL OMIT THIS SIGN AND THE QUANTITIES SHALL BE ADJUSTED APPROPRIATELY.
- 4A. THE MAXIMUM RECOMMENDED DISTANCE(S) BETWEEN CHANNELIZING DEVICES IN THE TAPER AREA(S) SHOULD BE 15 FEET AND SHOULD BE EQUAL IN FEET TO TWICE THE POSTED SPEED IN MILES PER HOUR IN THE PARALLEL AREA(S).
5. FOR OVERNIGHT CLOSURES, CHANNELIZING DEVICES SHALL BE LIGHTED PLASTIC DRUMS.
6. WHEN CALLED FOR IN THE FHWA ACCEPTANCE LETTER FOR THE SIGN SYSTEM SELECTED, THE TYPE A WARNING FLASHER, SHOWN ON THE WARNING SIGNS, SHALL BE POSITIONED ON THE SIDE OF THE SIGN NEAREST THE ROADWAY.
7. ALL TEMPORARY SIGNS, TYPE III BARRICADES, THEIR SUPPORT SYSTEMS AND LIGHTING REQUIREMENTS SHALL MEET NCHRP 350 CRASHWORTHY REQUIREMENTS STIPULATED IN THE 2005 EDITION OF THE MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION, THE STANDARD PLANS AND APPLICABLE SPECIAL PROVISIONS. ONLY DESIGNS AND MATERIALS APPROVED BY MDT WILL BE ALLOWED.
9. ALL TRAFFIC REGULATORS SHALL BE PROPERLY TRAINED AND SUPERVISED.
- 9A. IN ANY OPERATION INVOLVING MORE THAN ONE TRAFFIC REGULATOR, ONE PERSON SHOULD BE DESIGNATED AS HEAD TRAFFIC REGULATOR.
10. ALL TRAFFIC REGULATORS' CONDUCT, THEIR EQUIPMENT, AND TRAFFIC REGULATING PROCEDURES SHALL CONFORM TO THE CURRENT EDITION OF THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD) AND THE CURRENT EDITION OF THE MDT HANDBOOK ENTITLED "TRAFFIC REGULATORS INSTRUCTION MANUAL."
11. WHEN TRAFFIC REGULATING IS ALLOWED DURING THE HOURS OF DARKNESS, APPROPRIATE LIGHTING SHALL BE PROVIDED TO SUFFICIENTLY ILLUMINATE THE TRAFFIC REGULATOR'S STATIONS.
- 12E. THE MAXIMUM DISTANCE BETWEEN THE TRAFFIC REGULATORS SHALL BE NO MORE THAN 2 MILES IN LENGTH UNLESS RESTRICTED FURTHER IN THE SPECIAL PROVISIONS FOR MAINTAINING TRAFFIC. ALL SEQUENCES OF MORE THAN 2 MILES IN LENGTH WILL REQUIRE WRITTEN PERMISSION FROM THE ENGINEER BEFORE PROCEEDING.
13. WHEN INTERSECTING ROADS OR SIGNIFICANT TRAFFIC GENERATORS (SHOPPING CENTERS, MOBILE HOME PARKS, ETC.) OCCUR WITHIN THE ONE-LANE TWO-WAY OPERATION, INTERMEDIATE TRAFFIC REGULATORS AND APPROPRIATE SIGNING SHALL BE PLACED AT THESE LOCATIONS.
14. ADDITIONAL SIGNING AND/OR ELONGATED SIGNING SEQUENCES SHOULD BE USED WHEN TRAFFIC VOLUMES ARE SIGNIFICANT ENOUGH TO CREATE BACKUPS BEYOND THE W3-4 SIGNS.
15. THE HAND HELD (PADDLE) SIGNS REQUIRED BY THE MMUTCD TO CONTROL TRAFFIC WILL BE PAID FOR AS PART OF FLAG CONTROL.
- 16A. ADDITIONAL SPEED LIMIT SIGNS REFLECTING THE REDUCED SPEED SHALL BE PLACED AFTER EACH MAJOR CROSSROAD THAT INTERSECTS THE WORK AREA WHERE THE REDUCED SPEED IS IN EFFECT, AND AT INTERVALS ALONG THE ROADWAY SUCH THAT NO SPEED LIMIT SIGNS REFLECTING THE REDUCED SPEED ARE MORE THAN TWO MILES APART.
- 16B. WHEN REDUCED SPEED LIMITS ARE UTILIZED IN THE WORK AREA, ADDITIONAL SPEED LIMIT SIGNS RETURNING TRAFFIC TO ITS NORMAL SPEED SHALL BE PLACED BEYOND THE LIMITS OF THE REDUCED SPEED AS INDICATED.
- 16E. WHEN EXISTING SPEED LIMITS ARE REDUCED MORE THAN 10 MPH, THE SPEED LIMIT SHALL BE STEPPED DOWN IN NO MORE THAN 10 MPH INCREMENTS.
- 2BE. THE TRAFFIC REGULATORS SHOULD BE POSITIONED AT OR NEAR THE SIDE OF THE ROAD SO THAT THEY ARE SEEN CLEARLY AT A MINIMUM DISTANCE OF 500 FEET. THIS MAY REQUIRE EXTENDING THE BEGINNING OF THE LANE CLOSURE TO OVERCOME VIEWING PROBLEMS CAUSED BY HILLS AND CURVES.

SIGN SIZES

DIAMOND WARNING	- 48" x 48"
RECTANGULAR REGULATORY	- 48" x 60"
RS-18c REGULATORY	- 48" x 48"

NDT TO SCALE

 Michigan Department of Transportation TRAFFIC AND SAFETY MAINTAINING TRAFFIC TYPICAL	TYPICAL TEMPORARY TRAFFIC CONTROL FOR A TWO-LANE TWO-WAY ROADWAY WHERE ONE LANE IS CLOSED UTILIZING TRAFFIC REGULATORS AND USING A SINGLE STEP DOWN IN SPEED LIMIT		
	DRAWN BY: CON:AE:djf CHECKED BY: DMW	JUNE 2006 PLAN DATE:	M01500
FILE: PW RD/TS/Typ/cats/Signs/NT NON FRY/M01500.dgn REV. 08/17/2007			

SIGN MATERIAL SELECTION TABLE

SIGN SIZE	SIGN MATERIAL TYPE		
	TYPE I	TYPE II	TYPE III
≤ 36" X 36"		X	X
>36" X 36" < 96" TO WIDE		X	
> 96" WIDE TO 144" WIDE	X	X	
> 144" WIDE	X		

TYPE I ALUMINUM EXTRUSION
 TYPE II PLYWOOD
 TYPE III ALUMINUM SHEET

ROUNDING OF CORNERS IS NOT REQUIRED FOR TYPE I OR II SIGNS.
 VERTICAL JOINTS ARE NOT PERMITTED.
 HORIZONTAL JOINTS THROUGH SIGN LEGEND OR SYMBOLS ARE NOT PERMITTED.

POST SIZE REQUIREMENTS TABLE

SIGN AREA (ft ²)	POST TYPE		
	U-CHANNEL STEEL	SQUARE TUBULAR STEEL	WOOD
≤ 9	1 - 3 lb/ft ² *	1 - 2" 12 or 14 GA*	N/A
9 ≤ 20	2 - 3 lb/ft	2 - 2" 12 or 14 GA	1 - 4" X 6"*
> 20 ≤ 30	N/A	N/A	2 - 4" X 6"
> 30 ≤ 60	N/A	N/A	2 - 6" X 8"
> 60 ≤ 84	N/A	N/A	3 - 6" X 8"

*SIGNS 4 FEET AND GREATER IN WIDTH REQUIRE 2 POSTS.
 SIGNS GREATER THAN 8 FEET IN WIDTH REQUIRE 2 OR 3 WOOD
 POSTS DEPENDING ON AREA OF SIGN.
 A MAXIMUM OF 2 POSTS WITHIN A 7' PATH IS PERMITTED.

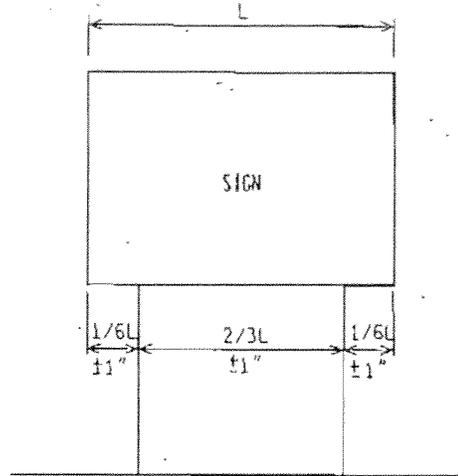
NOT TO SCALE

File:PN/Doc/RO/T&S/Typ/Dev/Sign Maint/raf D/WZD-100-A Rev. 8/21/06 ECH

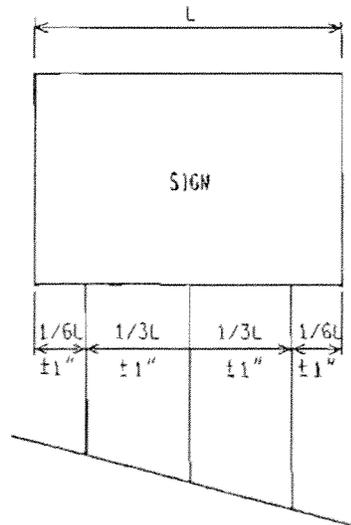
 PREPARED BY TRAFFIC AND SAFETY SUPPORT AREA DRAWN BY: CON/VECH CHECKED BY: AUG	_____ ENGINEER OF DELIVERY _____ ENGINEER OF DEVELOPMENT PENDING _____ FHWA APPROVAL DATE	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR GROUND DRIVEN SIGN SUPPORTS FOR TEMP SIGNS <table style="width: 100%; border: none;"> <tr> <td style="border: 1px solid black; width: 20%;">8/2006</td> <td style="border: none; width: 50%; text-align: center;">WZD-100-A</td> <td style="border: 1px solid black; width: 30%;">SHEET</td> </tr> <tr> <td style="border: none;">PLAN DATE</td> <td style="border: none;"></td> <td style="border: none;">1 of 11</td> </tr> </table>	8/2006	WZD-100-A	SHEET	PLAN DATE		1 of 11
8/2006	WZD-100-A	SHEET						
PLAN DATE		1 of 11						

NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.

2 POST SIGN SUPPORT SPACING



3 POST SIGN SUPPORT SPACING

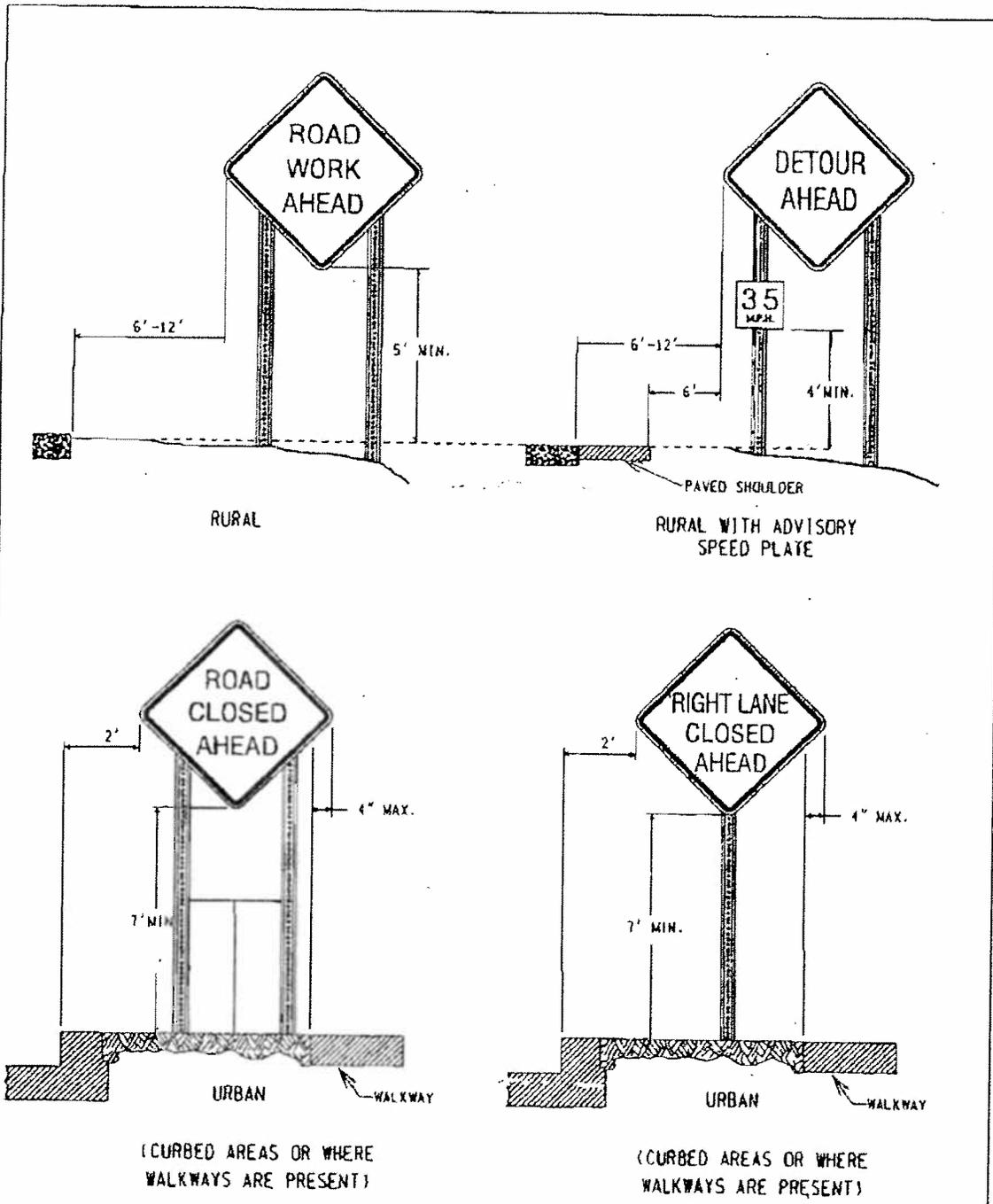


- * FOR ALL 11' AND 12' LONG SIGNS ON 3 WOOD SUPPORTS, SPREAD POSTS SO AS TO HAVE A 8' MIN. TO 9' MAX. DISTANCE BETWEEN OUTSIDE POSTS.

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN	PENDING FHWA APPROVAL DATE	8/2006	WZD-100-A	SHEET 2 of 11
File #/Doc/RO/T&S/Typ/Dev/Sign Maint/Inf 0/WZD-100-A Rev. 8/21/06 ECH		PLAN DATE		

NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.

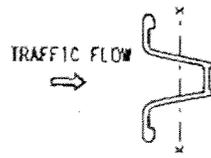
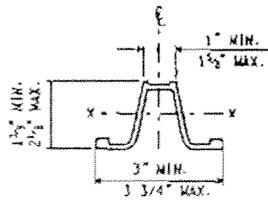
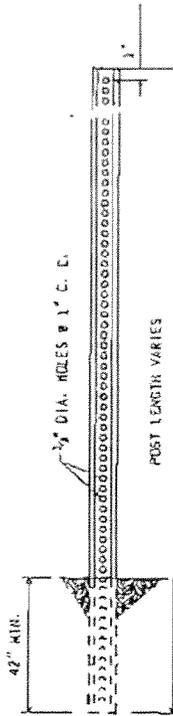


BOTTOM HEIGHT AND OFFSET

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN	PENDING FHWA APPROVAL DATE	8/2006 PLAN DATE	WZD-100-A	SHEET 3 of 11
FILED PW/Doc/RD/T&S/Typ/Dev/Sign Maint/Inf 0/WZD-100-A Rev. 8/21/05 ECH				

NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.



WEIGHT = 3 lbs/ft
 SECT. MOD. X-X = 0.31 CUBIC INCHES MIN.

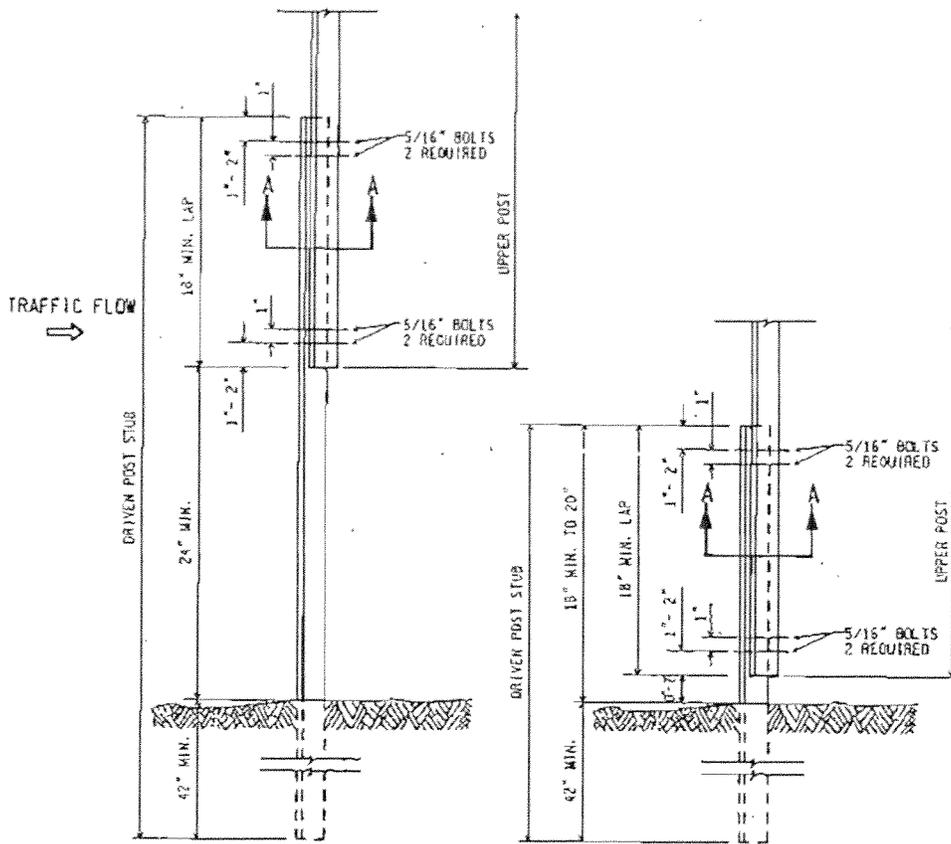
**3 lb. U - CHANNEL STEEL POST
 (NO SPLICE)**

MOUNT SIGN ON OPEN FACE OF
 U - CHANNEL STEEL POST

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN	PENDING FHWA APPROVAL DATE	8/2006	WZD-100-A	SHEET 4 of 11
File # P1700c/R0/TAS/Typ/00v/Sign 46in/rot D/WID-100-A Rev. 8/21/06 ECH	PLAN DATE			

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UPPER SPLICE

LOWER SPLICE

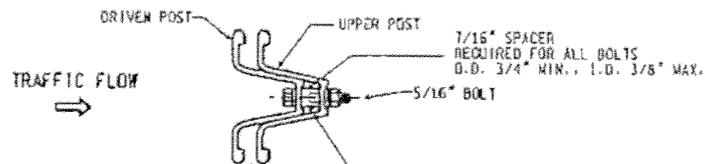
3 lb. U - CHANNEL STEEL POST
(WITH SPLICE)

MOUNT SIGN ON OPEN FACE OF
UPPER U - CHANNEL STEEL POST

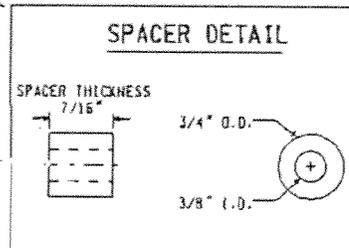
NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN	PENDING FHWA APPROVAL DATE	8/2006	WZD-100-A	SHEET 5 of 11
FILE #/DOC/RO/T&S/Typ/Dev/Sign Maint/Traf 0/WZD-100-A Rev. 8/21/06 ECH	PLAN DATE			

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SECTION A-A



NOTES:

1. THE SPACER THICKNESS SHALL BE 1/16" LESS THAN THE GAP BETWEEN THE POST WHEN POSITIONED IN THE UNBOLTED CONFIGURATION.
2. THE EXTERIOR BOLT (CLOSEST TO LAP), SPACER, WASHER, AND NUT SHALL BE INSTALLED IN A PREPUNCHED HOLE 1" TO 2" FROM THE END OF THE LAP.
3. THE INTERIOR BOLT (FARTHEST FROM LAP), SPACER, WASHER, AND NUT SHALL BE INSTALLED IN THE NEXT PREPUNCHED HOLE.
4. THE DRIVEN POST SHALL ALWAYS BE MOUNTED IN FRONT OF THE UPPER POST WITH RESPECT TO THE ADJACENT ONCOMING TRAFFIC, REGARDLESS OF THE DIRECTION THE SIGN IS FACING.
5. THE SPLICE LAP SHALL BE FASTENED BY FOUR-5/16" DIA. GALVANIZED A449 BOLTS (SAE J429 GRADE 5) OR GALVANIZED A325 BOLTS.

3 1b. U - CHANNEL STEEL POST
(WITH SPLICE)

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN	PENDING FHWA APPROVAL DATE	8/2006 PLAN DATE	WZD-100-A	SHEET 6 of 11
File:PM/Doc/RD/T&S/Typ/Dev/Sign Maint/raf 0/WZD-100-A Rev. 8/21/06 ECH				

NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.

5/16" DIAMETER GALVANIZED BOLT AND NUT

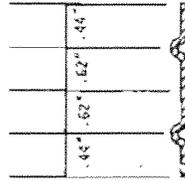
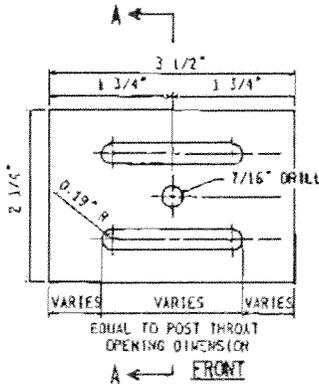
SELF-ALIGNING STEEL REINFORCING PLATE (TYP. ALUMINUM SHEET (TYPE III) SIGN ONLY)



FLAT WASHER

PLYWOOD (TYPE I) OR ALUMINUM SHEET (TYPE III) SIGN

SIGN TO 3 lb. POST CONNECTION



SECTION A-A

NOTES: (FOR STEEL SIGN REINF' PLATE)

1. MATERIAL: 12 GAUGE CARBON STEEL.
2. TOLERANCE ON ALL DIMENSIONS $\pm 0.0625"$
3. FINISH-AFTER STAMPING AND PUNCHING. GALVANIZE ACCORDING TO CURRENT SPECIFICATIONS FOR ZINC (HOT GALVANIZE) COATINGS ON PRODUCTS FABRICATED FROM PLATES OR STRIPS

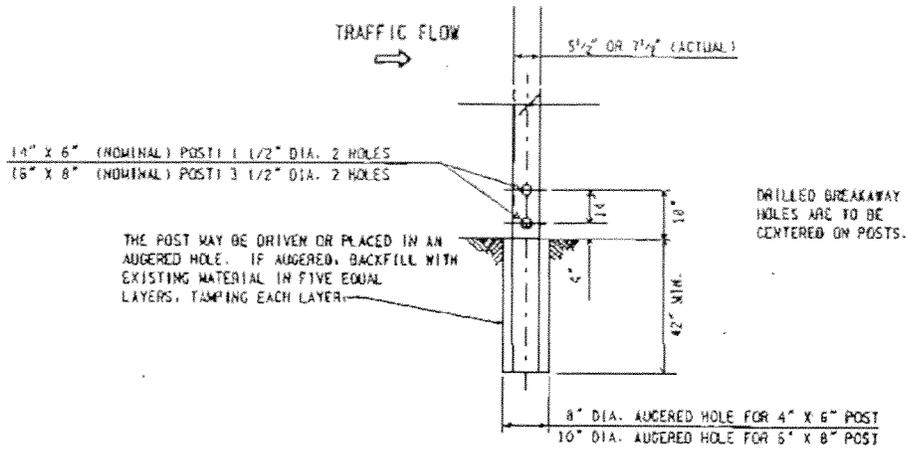
STEEL SIGN REINFORCING PLATE
REQUIRED FOR TYPE III SIGNS ONLY

3 lb. U - CHANNEL STEEL POST SIGN CONNECTION

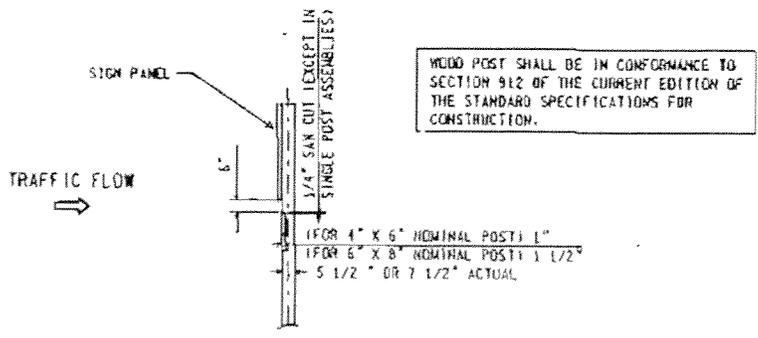
NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN	PENDING FHWA APPROVAL DATE	8/2006	WZD-100-A	SHEET 7 of 11
File Path: Doc/RO/T&S/Typ/Dev/Sign Maint/rof 0/WZD-100-A Rev. 8/21/06 ECM		PLAN DATE		

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WOOD POST BREAKAWAY HOLES/
DIRECT EMBEDMENT DETAILS



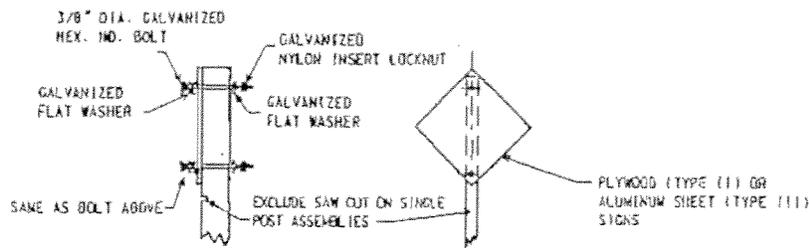
SAW CUT DETAIL
(MULTIPLE POST INSTALLATIONS)

WOOD POST DETAILS

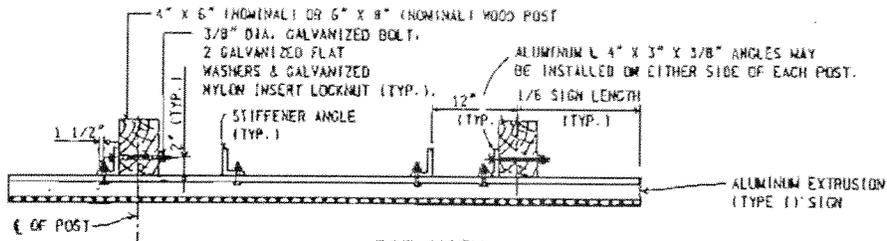
NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN	PENDING FHWA APPROVAL DATE	8/2006 PLAN DATE	WZD-100-A	SHEET 8 of 11
FILE # PM/Doc/RD/T&S/Typ/Dev/Stan Main/Tral 8/WZD-100-A Rev. 8/21/06 ECH				

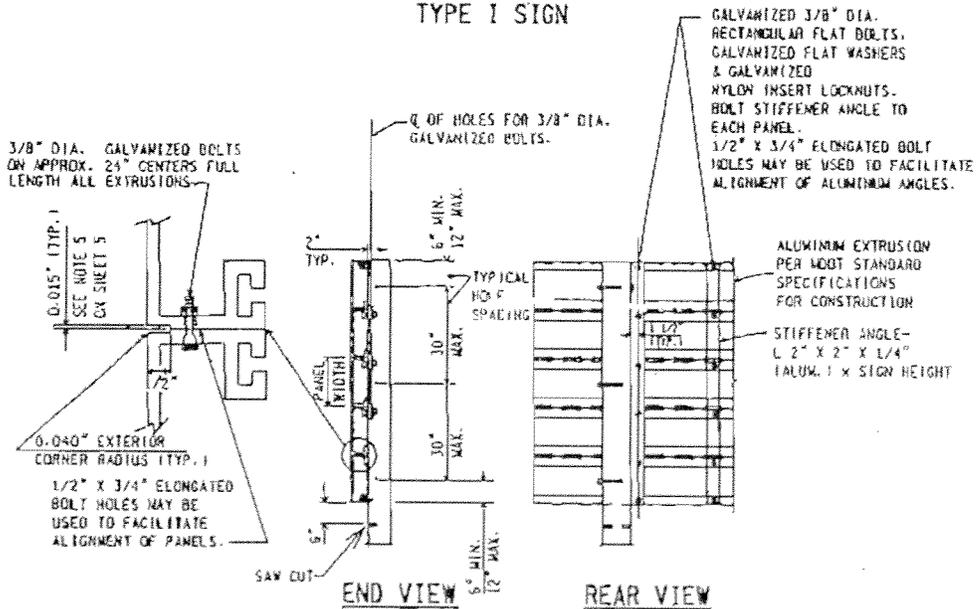
NOTE: THE ORIGINAL STONED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.



TYPE II AND TYPE III SIGNS



**TOP VIEW
TYPE I SIGN**

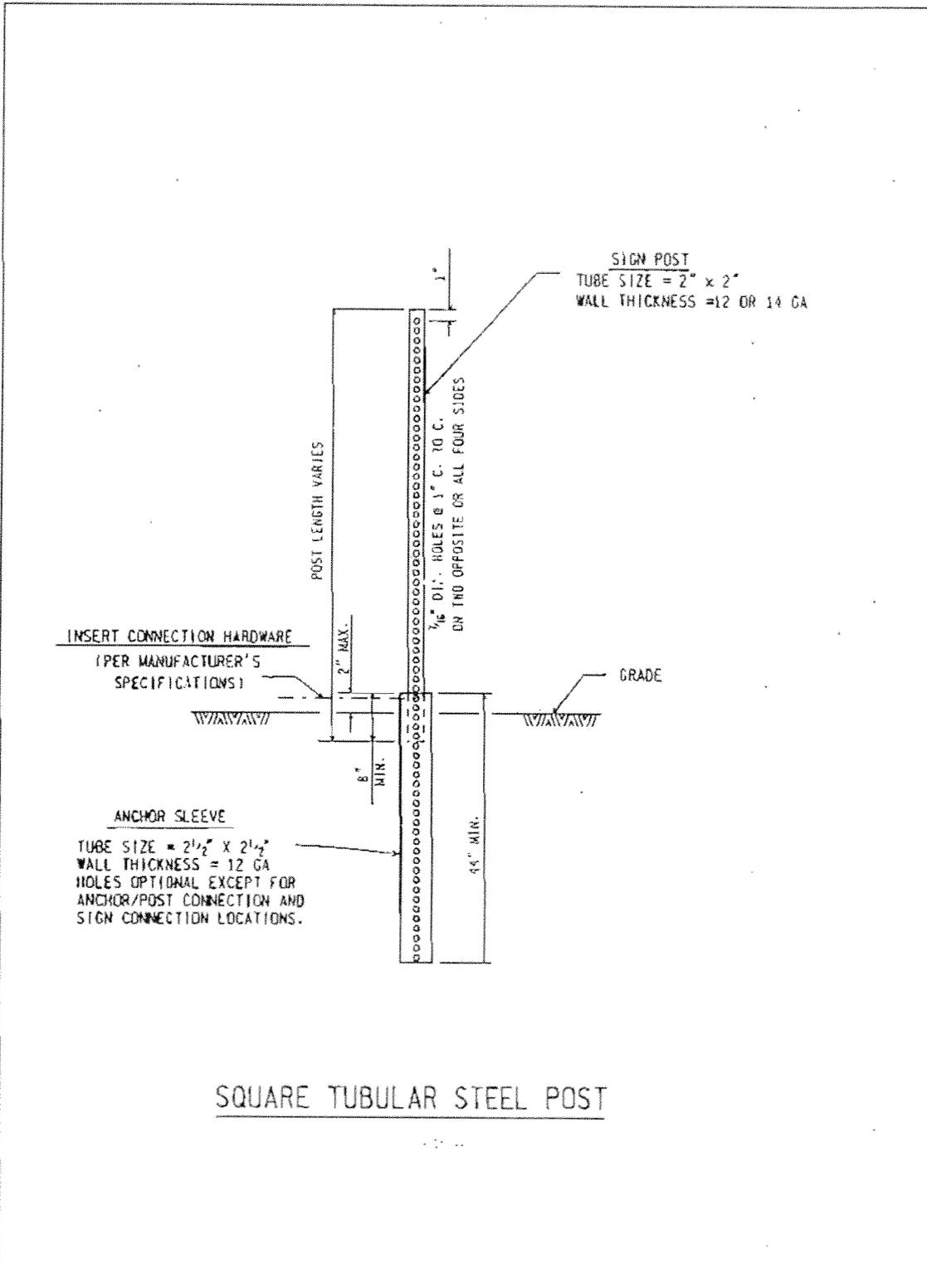


**TYPE I SIGN - ERECTION DETAILS
WOOD POST CONNECTIONS**

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN	PENDING	8/2006	WZD-100-A	SHEET 9 of 11
	FHWA APPROVAL DATE			

FILED BY: Doc/RB/TAS/Typ/Dev/Sign Maintref 0/420-100-A Rev. 8/21/06 ECH
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MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN	PENDING FHWA APPROVAL DATE	8/2006	WZD-100-A	SHEET 10 of 11
F110-PY/Doc/RD/T&S/Typ/Dev/Sign Maint/Inf of D/WZD-100-A Rev. 8/21/06 ECH	PLAN DATE			

NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.

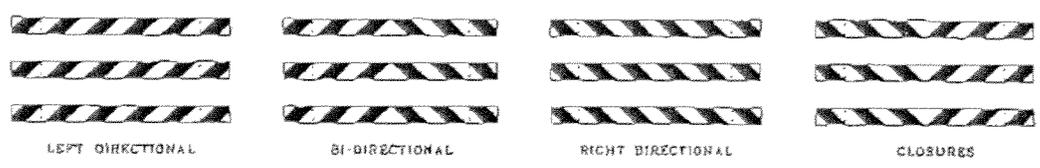
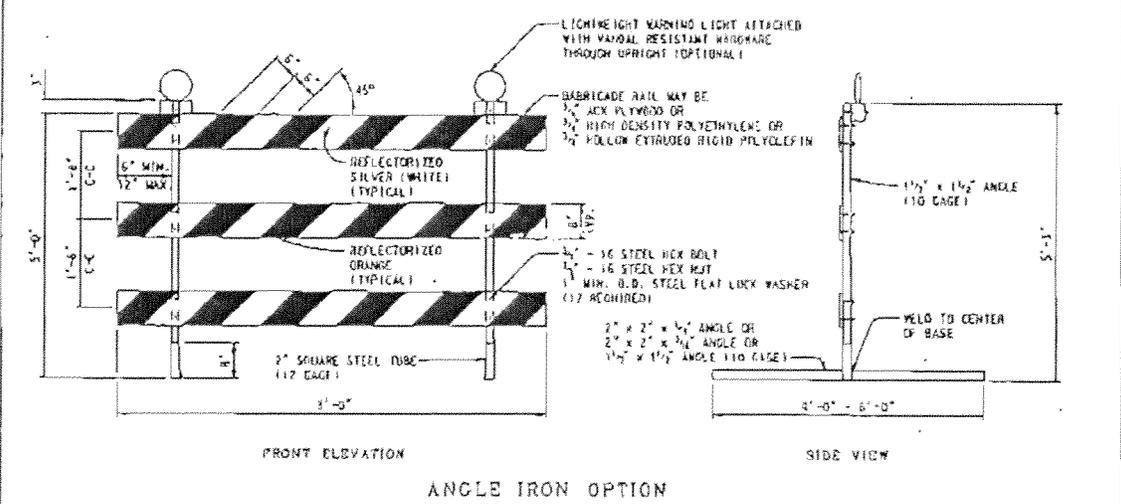
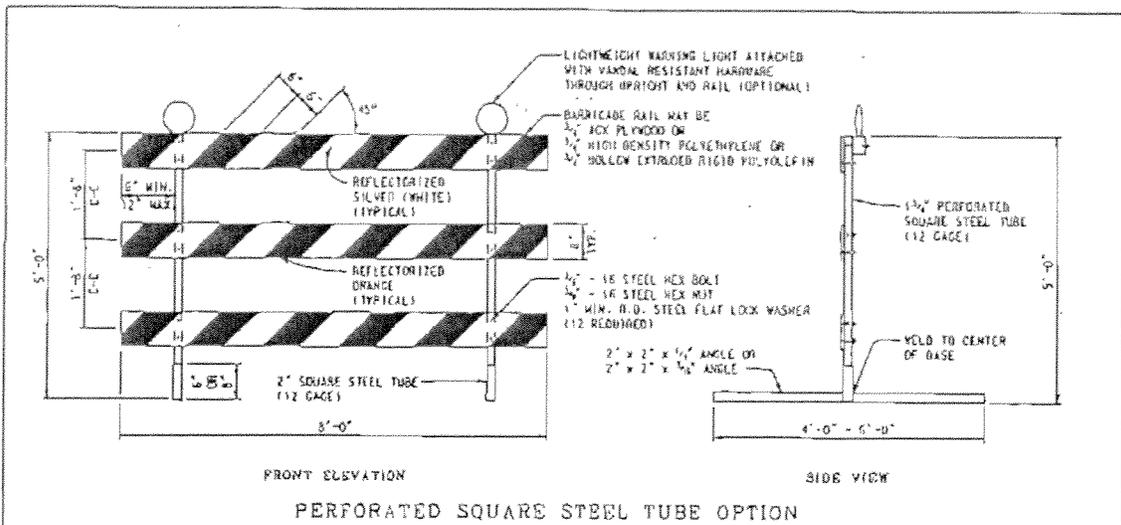
GENERAL NOTES:

1. A MAXIMUM OF TWO POSTS WITHIN A 7 FOOT PATH IS PERMITTED.
2. ALL SIGN POSTS SHALL COMPLY WITH NCHRP 350.
3. ALL POSTS SHALL BE EMBEDDED A MINIMUM OF 42".
4. BRACING OF POST IS NOT PERMITTED.
5. SIGN SHALL BE LEVEL, AND UPRIGHT FOR THE DURATION OF INSTALLATION.
6. ERECT POSTS SO THE SIGN FACE AND SUPPORTS DO NOT VARY FROM PLUMB BY MORE THAN 3/16" IN 3'. PROVIDE A CENTER-TO-CENTER DISTANCE BETWEEN POSTS WITHIN 2 PERCENT OF PLAN DISTANCE.
7. NO MORE THAN ONE SPLICE PER POST, AS SHOWN, WILL BE PERMITTED.
8. POST TYPES SHALL NOT BE MIXED WITHIN A SIGN SUPPORT INSTALLATION.
9. NO VERTICAL JOINTS ARE PERMITTED IN SIGN. NO HORIZONTAL JOINTS THROUGH SIGN LEGEND OR SYMBOLS ARE PERMITTED IN SIGN
10. REMOVE SIGN POSTS AND/OR POST STUBS IN THEIR ENTIRETY WHEN NO LONGER REQUIRED.
11. ALL LABOR, MATERIALS, AND EQUIPMENT, INCLUDING TEMPORARY SUPPORTS REQUIRED TO INSTALL, MAINTAIN, RELOCATE, COVER, AND/OR REMOVE THE TEMPORARY SIGN, INCLUDING SUPPORTS, ARE CONSIDERED TO BE INCLUDED IN THE COST OF THE TEMPORARY SIGN.
12. SAW CUTS IN WOOD POSTS ARE TO BE PARALLEL TO THE BOTTOM OF THE SIGN.
13. POSTS SHALL NOT EXTEND MORE THAN 4" ABOVE TOP OF SIGN.

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN	PENDING FHWA APPROVAL DATE	8/2006 PLAN DATE	WZD-100-A	SHEET 11 of 11
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NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.



BARRICADE RAIL SHEETING OPTIONS
TYPE III BARRICADES

Other Type III Barricades meeting current NCHRP crash worthy criteria can be found on the FHWA Safety website at http://safety.fhwa.dot.gov/roadway_dept/road_hardware/wzd.htm

NOT TO SCALE

File: 165/typ/Signs/WorkZones/wzd 125 d

Rev. 09/22/09 PJ

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR

Temporary
Traffic Control Devices

9/22/09
PLAN DATE

WZD-125-E

SHEET
1 of 3

ENGINEER OF DELIVERY

ENGINEER OF DEVELOPMENT
(SPECIAL DETAIL)
FHWA APPROVAL DATE

PREPARED BY
TRAFFIC AND SAFETY

DRAWN BY: ECH

CHECKED BY: MNB

MDOT
Michigan Department of Transportation

NOTE: THE ORIGINAL STORED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.

**TITLE SHEET
CITY OF DETROIT**

**MAYOR
MIKE DUGGAN**

CONTROL SECTION:

**DEPARTMENT OF PUBLIC WORK
RON BRUNDIGE, DIRECTOR
JOSE ABRAHAM, DEPUTY DIRECTOR**

JOB NO.: CONTRACT PW-6965

SPO :

SPO :

LOCAL AGENCY: City of Detroit, Wayne County

CONTRACT FOR: Approximately 2.2 miles of cold milling HMA surface, HMA resurfacing, concrete curb, sidewalk, curb ramps, driveway approaches, drainage structure adjustments, pavement removal and replacement, lane ties, pavement markings and miscellaneous construction.

LOCATION:

**MT. ELLIOT: FROM SEVEN MILE TO EIGHT MILE
SCHOOLCRAFT : FROM GRAND RIVER TO WYOMING**

STANDARD PLANS

R-28-G R-29-H R-100- G
R-44-F WZD-100-E*
R-83-B R- 30-E WZD-125-E*

*** Denotes Special Details**

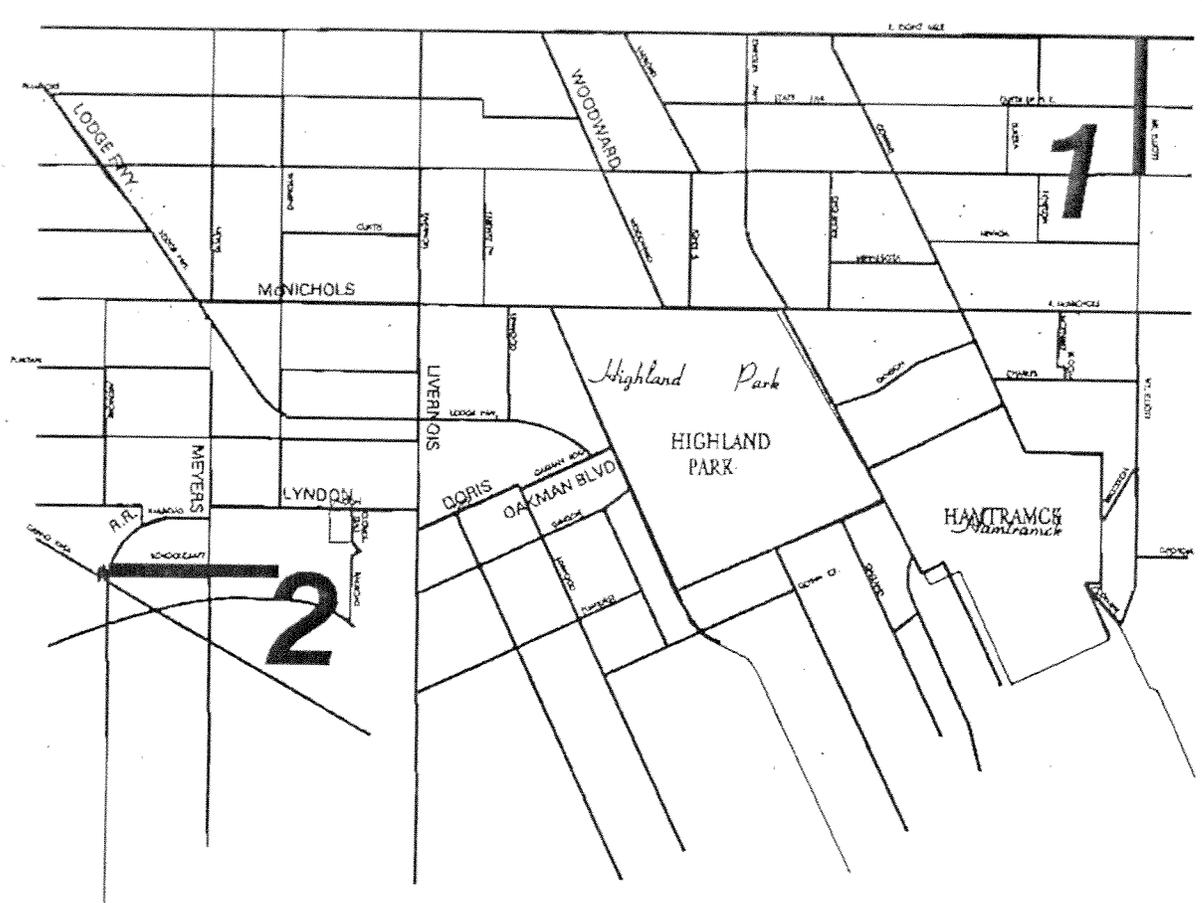
THE IMPROVEMENTS COVERED BY THESE PLANS ARE BASED ON THE MICHIGAN DEPARTMENT OF TRANSPORTATION LOCAL AGENCY PROGRAM GUIDE LINES FOR GEOMETRICS (3R) DATED AUGUST 28, 2008 EXCEPT WHERE OTHERWISE INDICATED ON THESE PLANS OR IN THE PROPOSAL AND SUPPLEMENTAL SPECIFICATIONS CONTAINED THEREIN, ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2012 VERSION AND MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION.

**LOCAL AUTHORITY APPROVAL
CITY OF DETROIT
GOVERNMENTAL AGENCY**

(SEAL)

**APPROVED: Noel Y. Santos, P.E.
ENGINEER**

**JULY 15, 2014
DATE**



H.M.A. CONTRACT: PW-6965

SECTOR

- 1. MT. ELLIOTT, SEVEN MILE TO EIGHT MILE
- 2. SCHOOLCRAFT, GRAND RIVER TO WYOMING

1
7-9

MT. ELLIOTT

7 MILE RD TO 8 MILE RD

TRAFFIC DATA:

PRESENT: 3700..4600; OUTER DRIVE TO 8 MILE RD ... OUTER DRIVE TO 7 MILE RD
FUTURE 3848..4784
COMMERCIAL: 20%..15 %
POSTED SPEED: 30.. 35 MPH

TYPE OF PAVEMENT	ASPHALT OVER CONCRETE
LENGTH	4860 FT
PAVEMENT WIDTH	(40...46) FEET

SCHEDULE OF ITEMS

LOCATION: MT ELLIOTT : 7 MILE RD TO 8 MILE RD

LENGTH1: LENGTH : 4860 Ft WIDTH : (40...48) Ft VARIES

WORK TYPE: Cold Milling, HMA Resurfacing, Concrete Curb, Sidewalk, Driveway Approach, Drainage Improvements and Misc Construction

Description of Work	Estimated Quantity	Item Unit
Mobilization, Max.		LS
Masonry and Conc Structure, Rem	1	Cyd
**Sidewalk, Rem	546	Syd
**Curb, Rem, Modified	2300	Ft
**Integral Curb and Sidewalk, 2 Feet, Rem, Modified	142	Ft
Pavt, Rem, Modified	198	Syd
Excavation, Earth, Modified	150	Cyd
Granular Material, CI II, Modified	45	Cyd
Aggregate Base, 4 inch	0	Syd
Sewer Connection, Modified	0	Ea
Sewer, CI A, 12 Inch, Tr Det B	0	Ft
Sewer Cleanout, Modified	320	Ft
Dr Structure Cover, Modified	7712	Lb
Catch Basin A, Modified	1	Ea
Catch Basin BT, Modified	1	Ea
Dr Structure Cleaning, Modified	32	Ea
Dr Structure Cover, Adj, Case 1, Modified	24	Ea
Dr Structure Cover, Adj, Case 2, Modified	3	Ea
Reconstructing Dr Structure, Case 1, Modified	5	Ea
Reconstructing Dr Structure, Case 2, Modified	0	Ea
Pavt for Butt Joints, Rem	219	Syd
Hand Patching	5	Ton
HMA, 4E3	2388	Ton
HMA, 5E3	1791	Ton
Cold Milling HMA Surface, Modified	21705	Syd
HMA Surface, Rem, Modified	261	Syd
Conditioning Existing Pavement, Modified	293	Ton
HMA Approach, Modified	50	Ton
HMA Shoulder, Modified	19	Ton
Pavt, Cleaning, Modified	0	LS
Conc Pavt , Misc, Nonreinf, 6 Inch, Modified	0	Syd
Conc Pavt , Misc, Nonreinf, 8 Inch, Modified	182	Syd
Pavt Repr, Nonreinf Conc, 10 Inch, Modified	0	Syd
Camant, Modified	2	Ton
Lane Tie, Epoxy Anchored	0	Ea
**Curb, Conc, Detail CD, Modified	2300	Ft

** Estimated quantities for use at the discretion of the Engineer and subject to the Bureau Chiefs or Head Engineer's approval during construction.

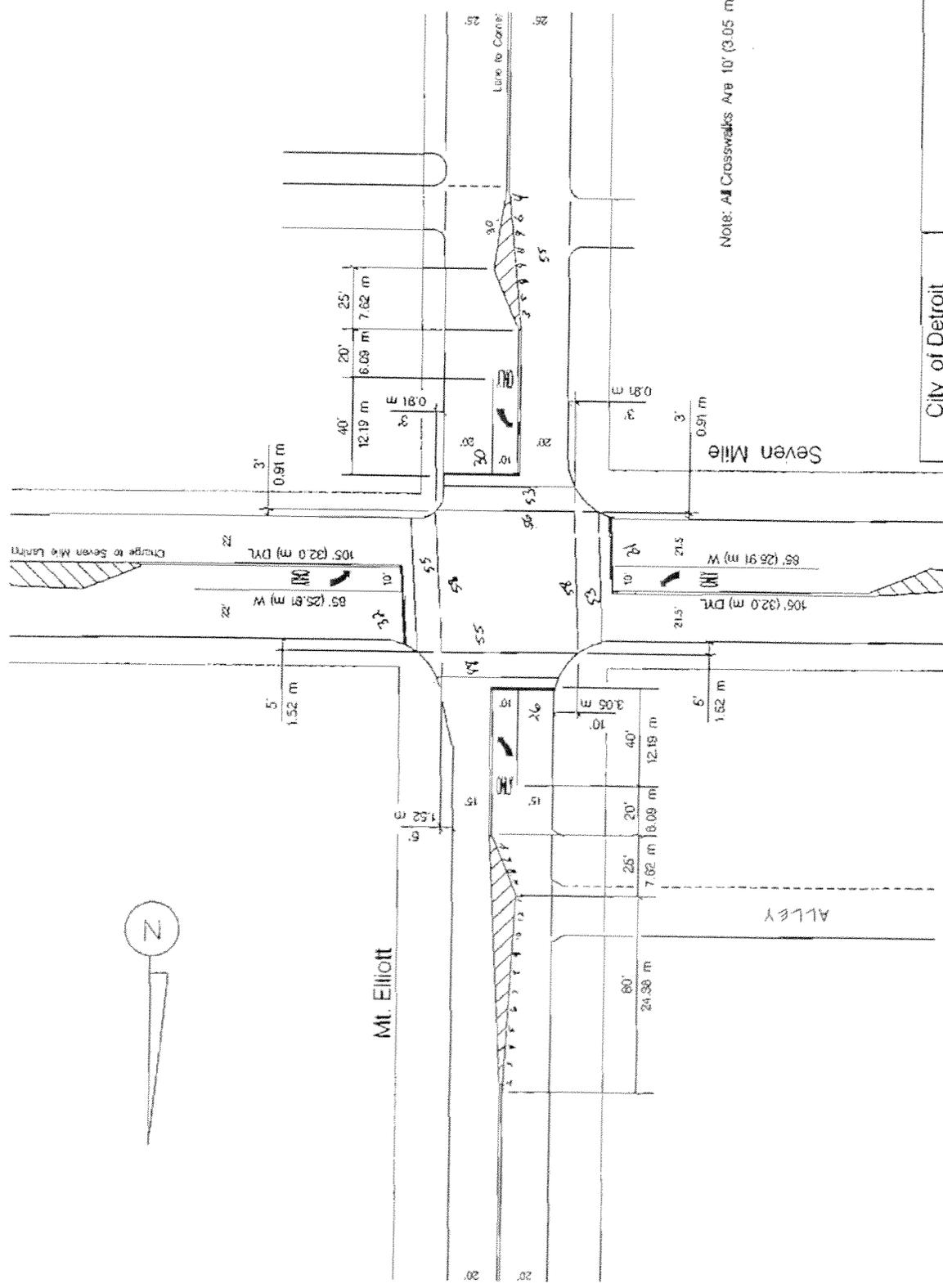
SCHEDULE OF ITEMS (continued)

LOCATION: MT ELLIOTT : 7 MILE RD TO 8 MILE RD

LENGTH1: LENGTH : 4860 Ft WIDTH : (40...46) Ft VARIES

WORK TYPE: Cold Milling, HMA Resurfacing, Concrete Curb, Sidewalk, Driveway Approaches, Drainage Improvements and Misc Construction

Description of Work	Estimated Quantity	Item Unit
Pavt Repr, Rem, Modified	0	Syd
**Integral Curb and Sidewalk, 2 Feet, Modified	142	Ft
Conc Sidewalk Repl, 4 Inch with Tree Roots, Modified	180	Sft
Detectable Warning Surface Tiles, Modified	80	Ft
Sidewalk Ramp, ADA, 6 Inch, Modified	1254	Sft
Sidewalk, Conc, 4 Inch, Modified	2977	Sft
**Sidewalk, Conc, 6 Inch, Modified	499	Sft
Pavt Mrkg, Ovly Cold Plastic, 18 Inch, Stop Bar	170	Ft
Pavt Mrkg, Ovly Cold Plastic, 24 Inch, Stop Bar	0	Ft
Pavt Mrkg, Ovly Cold Plastic, 6 Inch, Crosswalk	582	Ft
Pavt Mrkg, Ovly Cold Plastic, 12 Inch, Crosswalk	130	Ft
Pavt Mrkg, Ovly Cold Plastic, Only	2	Ea
Pavt Mrkg, Ovly Cold Plastic, Rt Turn Arrow Sym	1	Ea
Pavt Mrkg, Ovly Cold Plastic, Lt Turn Arrow Sym	1	Ea
Pavt Mrkg, Ovly Cold Plastic, Railroad Sym	2	Ea
Pavt Mrkg, Ovly Cold Plastic, Directional Arrow Sym	0	Ea
Pavt Mrkg, Sprayable Thermopl, 4 Inch, White	0	Ft
Pavt Mrkg, Sprayable Thermopl, 4 Inch, Yellow	9310	Ft
Pavt Mrkg, Modified Urethane, 8 Inch Cross Hatching, Yellow	104.5	Ft
Pavt Mrkg, Modified Urethane, 6 Inch, White	0	Ft
Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	4	Ea
Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	4	Ea
Traffic Regulator Control	1	LS
Lighted Arrow, Type C, Furn	2	Ea
Lighted Arrow, Type C, Oper	2	Ea
Minor Traf Devices	1	LS
Pavt Mrkg, Type NR, Paint, 4 Inch, White, Temp	0	Ft
Pavt Mrkg, Type NR, Paint, 4 Inch, Yellow, Temp	9310	Ft
Plastic Drum, High Intensity, Furn	100	Ea
Plastic Drum, High Intensity, Oper	100	Ea
Sign, Type B, Temp, Prismatic, Furn	1600	Sft
Sign, Type B, Temp, Prismatic, Oper	1600	Sft
Hydroseeding, Modified	700	Syd
Topsoil Surface, Furn, LM, Modified	59	Cyd
Water Shutoff, Adj, Modified	0	Ea
Pavt Mrkg, Sprayable thermopl, 6 Inch, White	0	Ft
Recessing for Pavt Mrkg, 12 Inch	130	Ft
Recessing for Pavt Mrkg, 6 Inch	692	Ft
Recessing for Pavt Mrkg, 18 Inch	194	Ft
Recessing for Pavt Mrkg, 24 Inch	114	Ft
Pavt Mrkg, Sprayable thermopl, 6 Inch, Crosswalk	110	Ft
Pavt Mrkg, Sprayable thermopl, 18 Inch, Stop Bar	24	Ft
Pavt Mrkg, Sprayable thermopl, 24 Inch, Stop Bar	114	Ft



Note: All Crosswalks Are 10' (3.05 m) Width

City of Detroit
 Department of
 Public Works
 Traffic Engineering Div.

Mt. Elliott-Seven Mile

Drawn A.L. B.
 Scale 1" = 40' (30.48 m)
 Date 3/15/2007
 NO. D-289

CHRYSLER PLANT

Mt. Elliott

Existing Crosswalk
To be Removed

Proposed Crosswalk

Existing Signalize Crosswalk

5'
1.52 m

25'
7.62 m

6'
1.52 m

< Outer Drive

385' N / Outer Dr.

Eight Mile >

MARK IV AUTOMOTIVE

UAW CHRYSLER TECH. TRAINING
CENTER PARKING

Notes: Zebra Crosswalks Spaced at 24" and the Bars are 18" x 20" Long

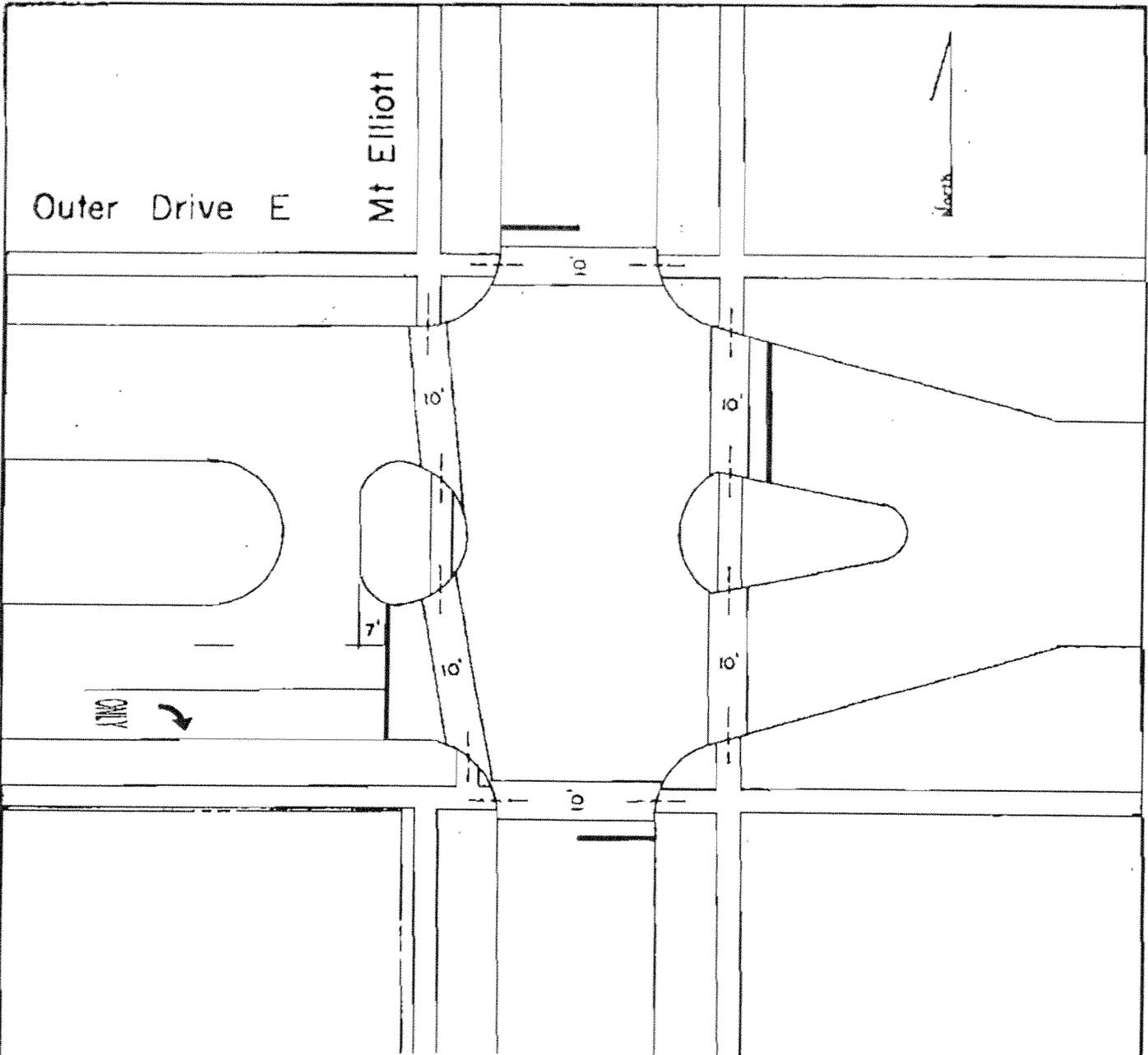


City of Detroit
Department of
Public Works
Traffic Engineering Div.

Mt Elliott
N / Outer Drive

Drawn: A.L.S.
Scale: 1" = 40' (1:1600)
Date: 6-16-2001

NO. D-294



REVISED: 03/18/2014 W.L. WILLIAMS



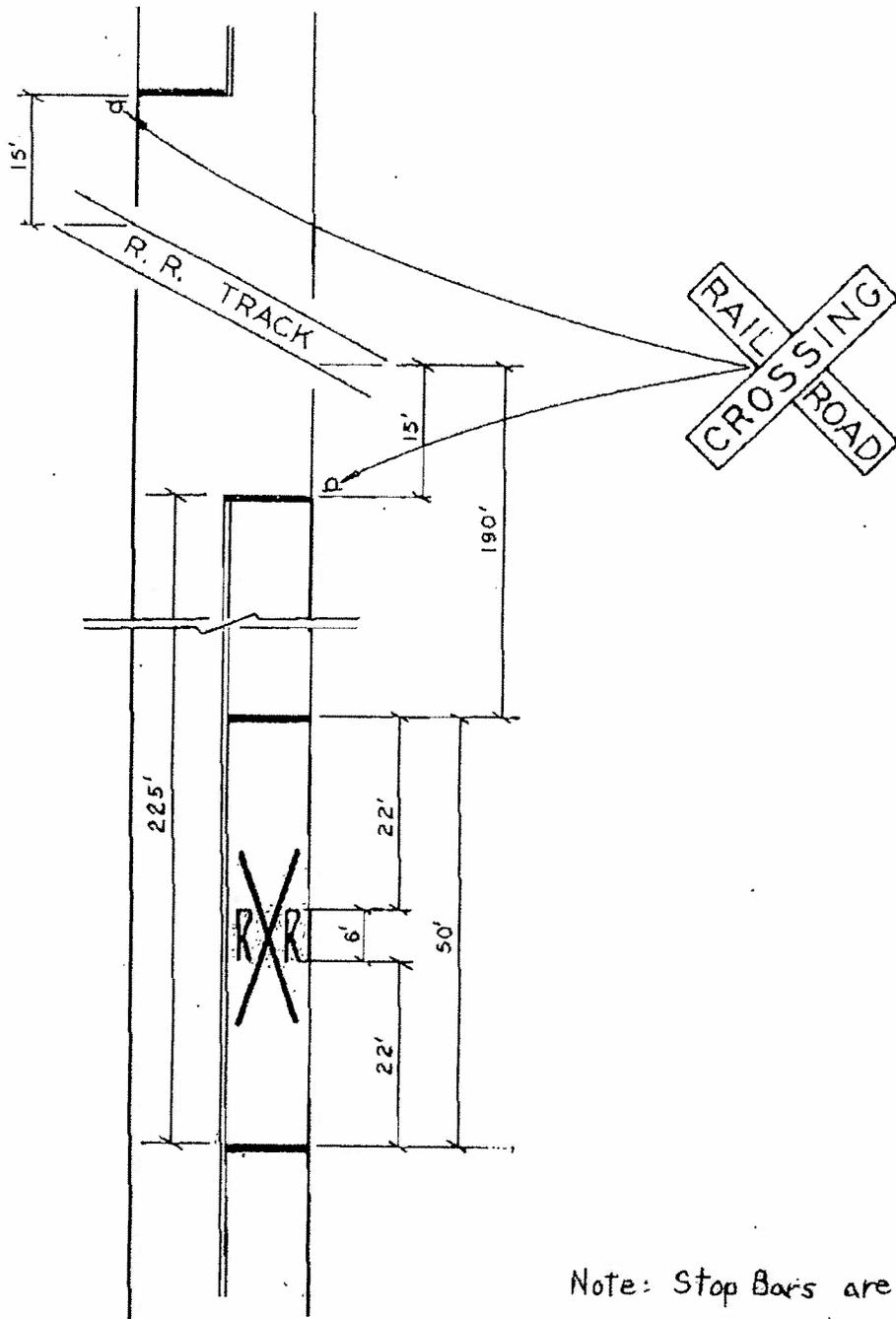
CITY OF DETROIT
DEPARTMENT OF
TRANSPORTATION

PLANNING & TRAFFIC ENGINEERING

Mt Elliott - Outer Drive

DRAWN T. D. Mullin
SCALE 1" = 40'
DATE 2 May 1977

NO. D-297



Note: Stop Bars are 24" wide

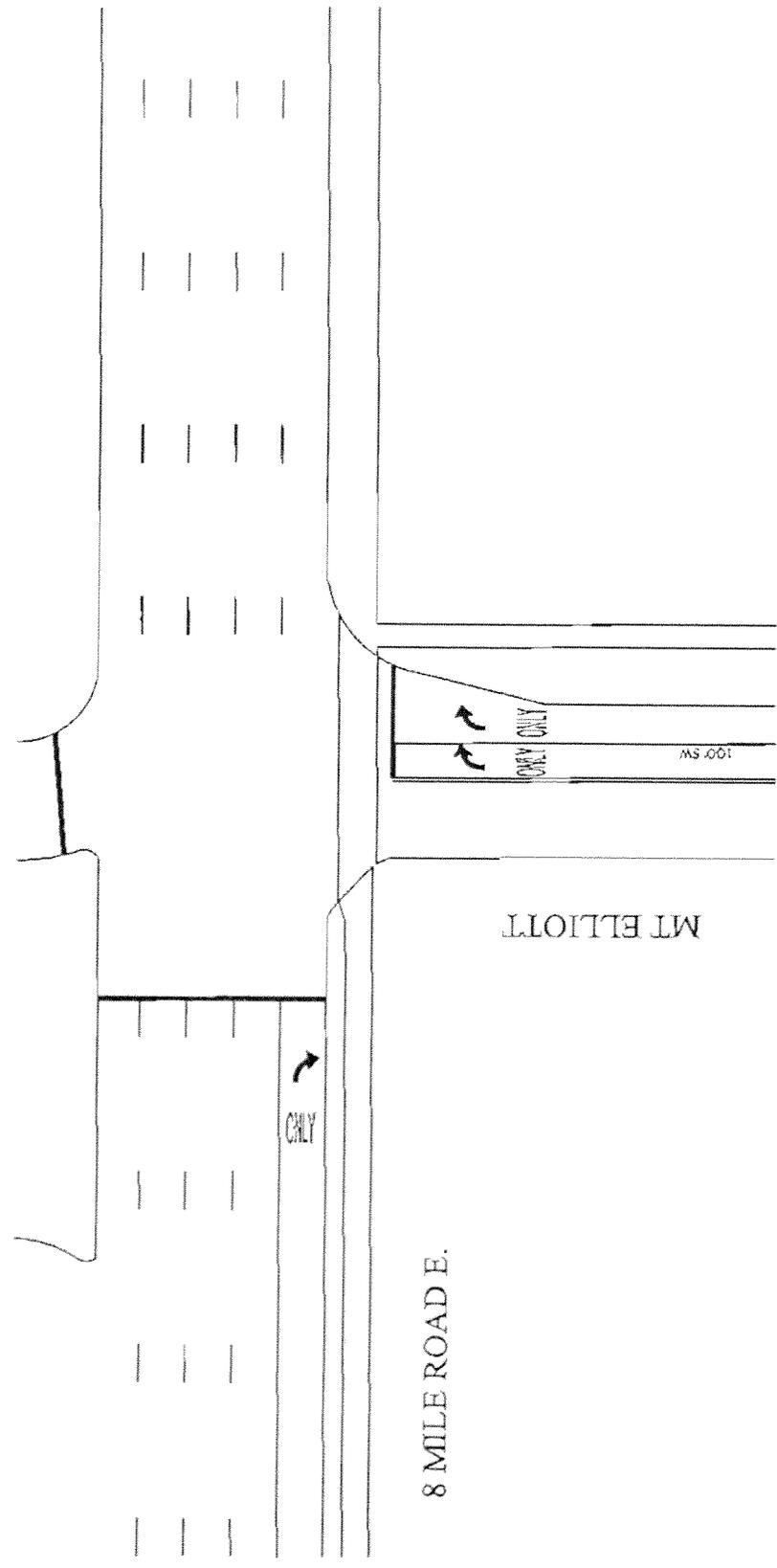
BRUNING 9587, PLAN # 1280

dt
 CITY OF DETROIT
 DEPARTMENT OF
 TRANSPORTATION
 Transportation Engineering

AP

TYPICAL PAVEMENT
 MARKING AT R. R. CROSSING

DRAWN *A. Brown*
 SCALE 1" = 20'
 DATE 7-16-94
NO. SG-80



DRAWN: A.D. BOLTON
 SCALE: 1" = 30'
 DATE: 07-05-2014

NO. D-369

8 MILE ROAD E.
 MT ELLIOTT ST.

CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 TRAFFIC ENGINEERING DIVISION

SCHOOLCRAFT

GRAND RIVER TO WYOMING

TRAFFIC DATA:

PRESENT: 4600...6300...5900 ; GRAND RIVER TO SCHAEFER... TO MEYERS... TO WYOMING
FUTURE : 4784...6552...6136
COMMERCIAL: 10%
POSTED SPEED: 30 MPH

TYPE OF PAVEMENT	ASPHALT OVER CONCRETE
LENGTH	6855 FT
PAVEMENT WIDTH	(40...50..77.5) FT

SCHEDULE OF ITEMS

PAGE 1 OF 2

LOCATION: SCHOOLCRAFT : FROM GRAND RIVER TO WYOMING

LENGTH1: LENGTH : 6855 Ft WIDTH : (40..50..77.5) Ft VARIES

WORK TYPE: Cold Milling, HMA Resurfacing, Concrete Curb, Sidewalk, Driveway Approach,
Drainage Improvements and Misc Construction

Description of Work	Estimated Quantity	Item Unit
Mobilization, Max.	0	LS
Masonry and Conc Structure, Rem	1	Cyd
**Sidewalk, Rem	2509	Syd
**Curb, Rem, Modified	5232	Ft
**Integral Curb and Sidewalk, 2 Feet, Rem, Modified	0	Ft
Pavt, Rem, Modified	505	Syd
Excavation, Earth, Modified	31	Cyd
Granular Material, CI II, Modified	97	Cyd
Aggregate Base, 4 inch	73	Syd
Sewer Connection, Modified	0	Ea
Sewer, CI A, 12 inch, Tr Det B	0	Ft
Sewer Cleanout, Modified.	260	Ft
Dr Structure Cover, Modified	31330	Lb
Catch Basin A, Modified	1	Ea
Catch Basin BT, Modified	1	Ea
Dr Structure Cleaning, Modified	130	Ea
Dr Structure Cover, Adj, Case 1, Modified	121	Ea
Dr Structure Cover, Adj, Case 2, Modified	3	Ea
Reconstructing Dr Structure, Case 1, Modified	6	Ea
Reconstructing Dr Structure, Case 2, Modified	0	Ea
Pavt for Butt Joints, Rem	1327	Syd
Hand Patching	5	Ton
HMA, 4E3	3424	Ton
HMA, 5E3	2568	Ton
Cold Milling HMA Surface, Modified	31130	Syd
HMA Surface, Rem, Modified	1829	Syd
Conditioning Existing Pavement, Modified	419	Ton
HMA Approach, Modified	229	Ton
HMA Shoulder, Modified	30	Ton
Pavt, Cleaning, Modified	0	LS
Conc Pavt , Misc, Nonreinf, 6 inch, Modified	515	Syd
Conc Pavt , Misc, Nonreinf, 8 inch, Modified	0	Syd
Pavt Repr, Nonreinf Conc, 10 inch, Modified	73	Syd
Cement, Modified	2	Ton
Lane Tie, Epoxy Anchored	65	Ea
**Curb, Conc, Detail CD, Modified	5232	Ft

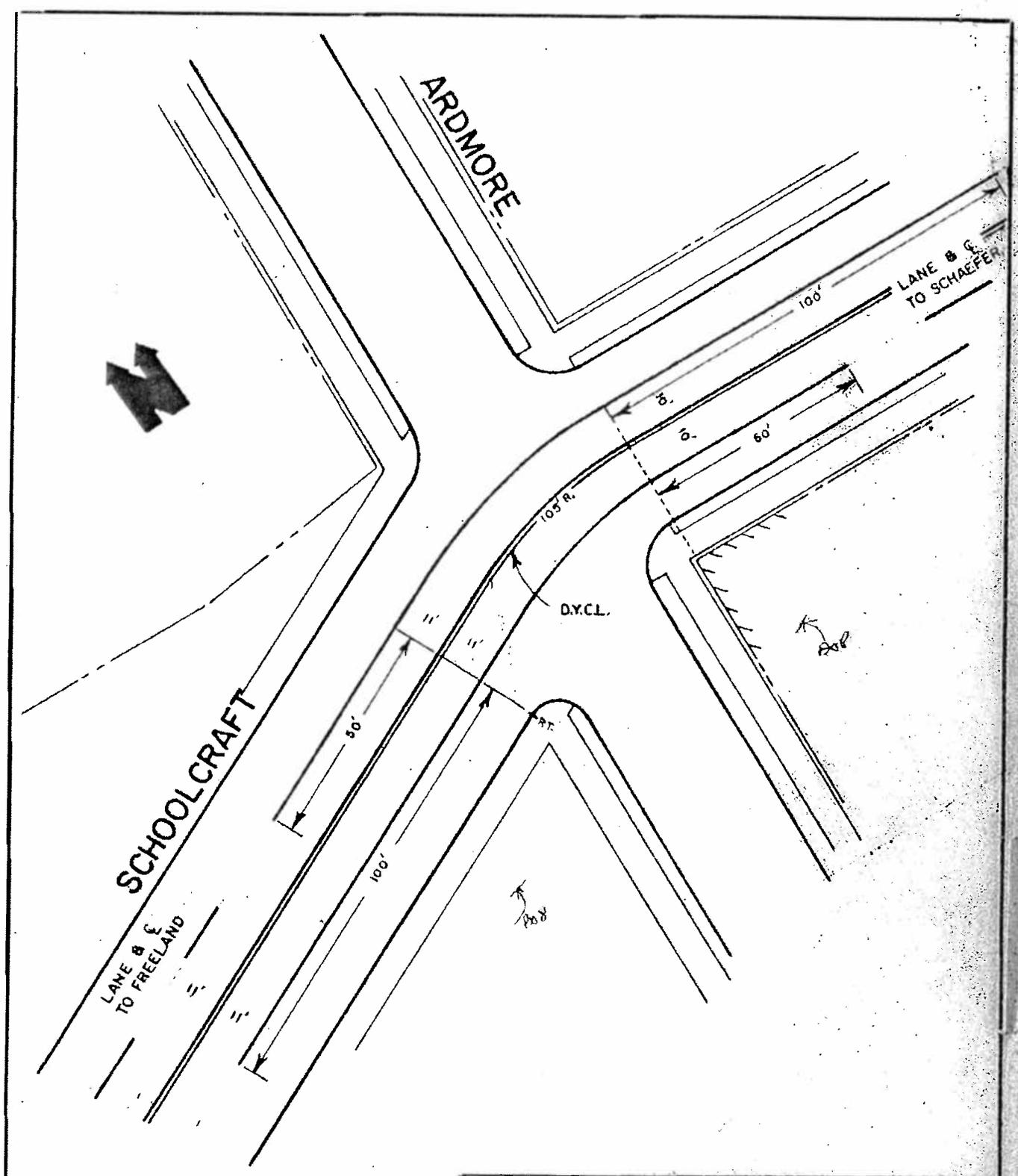
** Estimated quantities for use at the discretion of the Engineer and subject to the Bureau Chief's or Head Engineer's approval during construction.

LOCATION: SCHOOLCRAFT : FROM GRAND RIVER TO WYOMING

LENGTH1: LENGTH : 6855 Ft WIDTH : (40..50..77.5) Ft VARIES

WORK TYPE: Cold Milling, HMA Resurfacing, Concrete Curb, Sidewalk, Driveway Approaches,
Drainage Improvements and Misc Construction

Description of Work	Estimated	
	Quantity	Item Unit
Pavt Repr, Rem, Modified	73	Syd
**Integral Curb and Sidewalk, 2 Feet, Modified	0	Ft
Conc Sidewalk Repl, 4 Inch with Tree Roots, Modified	TotalsID48	Sft
Detectable Warning Surface Tiles, Modified	620	Ft
Sidewalk Ramp, ADA, 6 Inch, Modified	5001	Sft
Sidewalk, Conc, 4 Inch, Modified	14375	Sft
**Sidewalk, Conc, 6 Inch, Modified	2628	Sft
Pavt Mrkg, Ovly Cold Plastic, 18 inch, Stop Bar	75	Ft
Pavt Mrkg, Ovly Cold Plastic, 24 Inch, Stop Bar	0	Ft
Pavt Mrkg, Ovly Cold Plastic, 6 Inch, Crosswalk	280	Ft
Pavt Mrkg, Ovly Cold Plastic, 12 Inch, Crosswalk	0	Ft
Pavt Mrkg, Ovly Cold Plastic, Only	2	Ea
Pavt Mrkg, Ovly Cold Plastic, Rt Turn Arrow Sym	0	Ea
Pavt Mrkg, Ovly Cold Plastic, Lt Turn Arrow Sym	2	Ea
Pavt Mrkg, Ovly Cold Plastic, Railroad Sym	2	Ea
Pavt Mrkg, Ovly Cold Plastic, Directional Arrow Sym	0	Ea
Pavt Mrkg, Sprayable Thermopl, 4 inch, White	0	Ft
Pavt Mrkg, Sprayable Thermopl, 4 inch, Yellow	11187	Ft
Pavt Mrkg, Modified Urethane, 6 inch Cross Hatching, Yellow	500	Ft
Pavt Mrkg, Modified Urethane, 6 inch, White	0	Ft
Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	4	Ea
Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	4	Ea
Traffic Regulator Control	1	LS
Lighted Arrow, Type C, Furn	2	Ea
Lighted Arrow, Type C, Oper	2	Ea
Minor Traf Devices	1	LS
Pavt Mrkg, Type NR, Paint, 4 Inch, White, Temp	0	Ft
Pavt Mrkg, Type NR, Paint, 4 inch, Yellow, Temp	11187	Ft
Plastic Drum, High Intensity, Furn	0	Ea
Plastic Drum, High Intensity, Oper	140	Ea
Sign, Type B, Temp, Prismatic, Furn	1600	Sft
Sign, Type B, Temp, Prismatic, Oper	1600	Sft
Hydroseeding, Modified	1385	Syd
Topsoil Surface, Furn, LM, Modified	116	Cyd
Water Shutoff, Adj, Modified	10	Ea
Pavt Mrkg, Sprayable thermopl, 6 inch, White	0	Ft
Recessing for Pavt Mrkg, 12 inch	0	Ft
Recessing for Pavt Mrkg, 6 inch	829	Ft
Recessing for Pavt Mrkg, 18 inch	223	Ft
Recessing for Pavt Mrkg, 24 Inch	114	Ft
Pavt Mrkg, Sprayable thermopl, 8 inch, Crosswalk	549	Ft
Pavt Mrkg, Sprayable thermopl, 18 Inch, Stop Bar	148	Ft
Pavt Mrkg, Sprayable thermopl, 24 Inch, Stop Bar	114	Ft



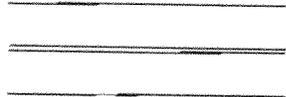
CITY OF DETROIT
 DEPARTMENT OF STREETS AND TRAFFIC

ARDMORE - SCHOOLCRAFT

DRAWN JRZ
 APPROVED *[Signature]*
 CHECKED *[Signature]*
 SCALE 1" = 30'
 DATE 1-29-71

NO. L-63
 CL-35

SCHOOLCRAFT AVE.

FROM	TO	LENGTH		SKETCH	WIDTH
		ACTUAL	CHARGE CL LL		
SCHAEFER	ARDMORE	<u>1270'</u> 387.10m	<u>2540'</u> 774.19m		<u>40'</u> 12.19m
ARDMORE	GRAND RIVER	<u>400'</u> 121.92m		SEEN DWG NO. GR - 14310 AND DWG NO. L - 63	

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
TRAFFIC ENGINEERING DIVISION

SCHOOLCRAFT AVE.
SCHAEFER - GRAND RIVER

sl

DRAWN : J.LAPPIN
SCALE : N/A
DATE : 01 - 19 - 2000

NO. L - 63

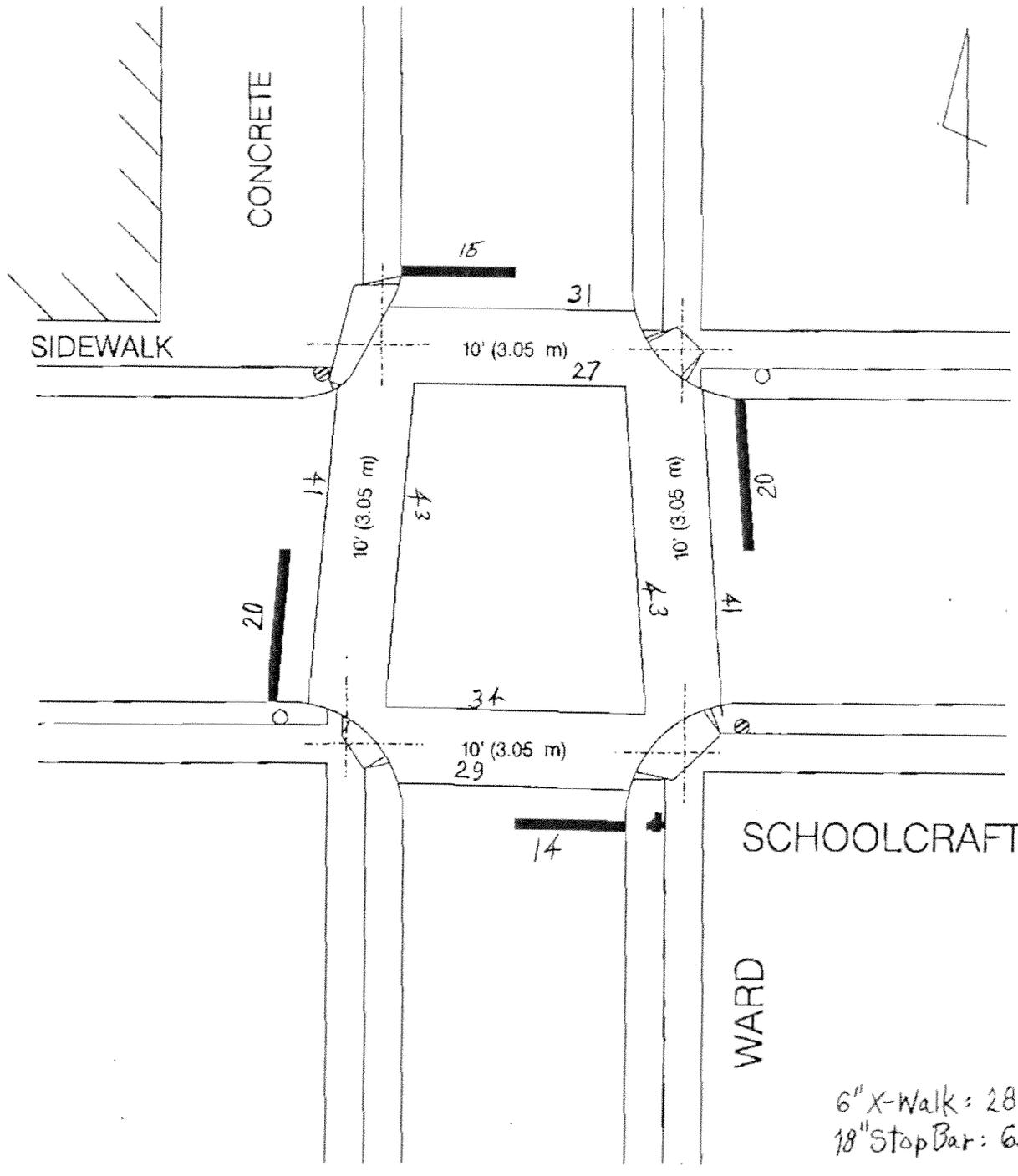
SCHOOLCRAFT AVE

FROM	TO	LENGTH		SKETCH	WIDTH
		ACTUAL	CHARGE		
			CL	LL	
EWALD CIRCLE	WYOMING	3580'	890'	<hr/> skip v. EQUAL <hr/> EQUAL <hr/>	38'
WYOMING	ARDMORE	6100'	12200'	<hr/> <hr/>	40'
ARDMORE	GRAND RIVER	400'		SEE DWG N° GR-14310 AND DWG N° L-63	

EL

 CITY OF DETROIT DEPARTMENT OF TRANSPORTATION Transportation Engineering	SCHOOLCRAFT AVENUE EWALD CIRCLE-GRAND RIVER	DRAWN <i>Δ Brown</i> SCALE N/A DATE 7-27-94
		NO. CL-35-2

N



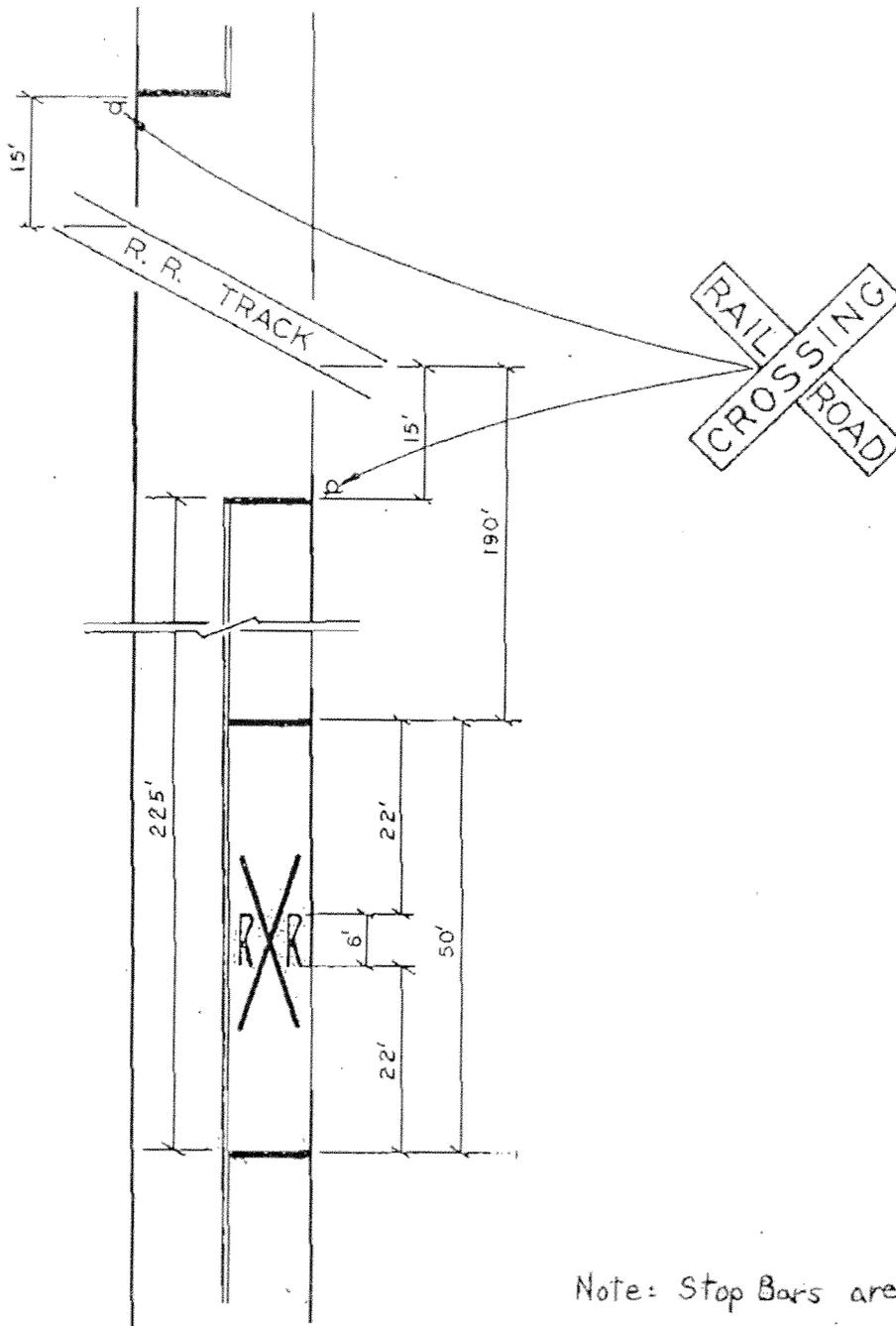
6" X-Walk: 289'
 18" Stop Bar: 69'

SL

CITY OF DETROIT
 DEPARTMENT OF
 PUBLIC WORKS
 TRAFFIC ENGINEERING

SCHOOLCRAFT - WARD

DRAWN J. ROOSE
 SCALE 1" = 20'
 DATE 04-05-00
 NO. C-381



Note: Stop Bars are 24" wide

DRAWING BOARD FORM # 1260



CITY OF DETROIT
DEPARTMENT OF
TRANSPORTATION
Transportation Engineering

AP

TYPICAL PAVEMENT
MARKING AT R. R. CROSSING

DRAWN A. Brown
SCALE 1" = 20'
DATE 7-16-94

NO. SG-80

PROGRESS CLAUSE

PROGRESS CLAUSE: After receiving notice of award of contract start work the date designated as the starting date herein or the date agreed upon with the Engineer. In no case, shall any work be commenced prior to receipt of formal notice of award by the department.

The starting date for this project shall be within 10 calendar days after receiving notice of award and the entire project shall be completed within 60 Calendar days inclusive of rain days, if any, (except any landscaping maintenance guarantee work) from the starting date with all the HMA paving completed within 40 Calendar days from start of the project. No HMA pavement work will be allowed after October 15, 2014.

The low bidder(s) for the work covered by this proposal will be required to meet with department representatives to work out a detailed progress schedule. The schedule for this meeting will be set within one week after the low bidder is determined.

The named subcontractor(s) for Specialty and/or Designated Items (if such items are designated in the proposal) which materially affect the work schedule, shall also be present at the scheduled meeting and they will be required to sign the Progress Schedule to indicate their approval of the scheduled dates of work set forth in the Progress Schedule.

The City Engineering Division, Department of Public Works will arrange the time and place for the meeting.

The Progress Schedule shall include, as a minimum, the controlling work items for the completion of the project and the planned dates (or work day for a work day project) that these work items will be controlling operations. When specified in the bidding proposal, the date the project is to be opened to traffic as well as the final project completion date shall also be included in the project schedule.

If the Bidding Proposal specifies other controlling dates, these shall also be included in the Progress Schedule.

Failure on the part of the Contractor to carry out the provisions of the Progress Schedule, as established, may be considered sufficient cause to prevent bidding future projects until a satisfactory rate of progress is again established.

Liquidated damages will be applied based on Section 108.10.C of the 2012 Michigan Department of Transportation Standard Specifications for Construction.

Contractor's attention is hereby called to see the Coordination Clause in the proposal.

CITY OF DETROIT
SPECIAL PROVISION
FOR
WORKING AREA AND PROJECT CLEANUP

1 of 1

Revised: 3-22-2006

All the work under this Contract shall be in City streets, alleys, easements, or rights-of-way, and the space allowed for the Contractor's operations shall be in City streets and alleys adjacent to his work. Construction equipment, storage of materials, and the construction operations shall normally be restricted to such areas. Should additional working or storage space be desired, the Contractor may be permitted to utilize adjacent private property provided he makes all arrangements with the owners, bears all expense in connection with its use, and in no way involves or obligates the City or State by such use.

Materials delivered on the street shall be neatly and compactly piled in such manner as to cause the least inconvenience to adjacent property owners and the general public.

Working areas shall be promptly restored to their original condition as soon as the required construction work has been completed at the particular location, and shall not be used as a storage area for unneeded material or construction equipment.

The work and all property used in connection with the work shall be kept in a neat and orderly condition at all times. Waste material and refuse from the Contractor's operations may be temporarily piled behind the curb in a manner not to interfere with pedestrians. Waste materials, rubbish, and debris shall not be allowed to accumulate and shall be removed daily, as directed by the Engineer. Construction equipment and excess materials shall be promptly removed from the site as they become no longer needed for the progress of the work.

All cost relating to maintaining a neat working area and providing the required cleanup will not be paid for separately but shall be included in the total project cost.

CITY OF DETROIT
SPECIAL PROVISION
FOR
COORDINATION CLAUSE FOR HMA RESURFACING
AND
MISCELLANEOUS CONSTRUCTION

1 of 1

DET:

Revised: 01-31-12

The Contractor shall coordinate his operations with others performing work within, or adjacent to, the Construction Influence Area (CIA), to avoid conflicts in maintaining traffic, construction signing, and progression of construction activities.

The Contractor's attention is called to the requirements of cooperation with others as covered in subsection 104.08 of the 2012 Michigan Department of Transportation Standard Specifications for Construction.

The Contractor will be required to coordinate his work with the curb-side garbage pick-up within the Construction Influence Area.

No claim for extra compensation or adjustments in contract unit prices will be allowed on account of delay or failure of others to complete work units scheduled.

CITY OF DETROIT
SPECIAL PROVISION
FOR
LIMITATIONS OF OPERATIONS
AND
ANTI-NOISE CONTROL

1 of 1

DET: UP

Revised: 05-12-12

The following paragraphs shall be added to subsection 108.02 Limitation of Operation of the 2012 Michigan Department of Transportation (MDOT) Standard Specifications for Construction.

Overtime shall be limited to the work days submitted on the progress schedule for the project. The work days used to develop the progress schedule shall be Monday through Saturday and shall not include Sundays or City Holidays. Overtime work on Sundays and City Holidays shall be limited to emergency work necessary to safeguard the health and safety of the public.

The following are the current City Holidays: New Year's Day, Martin Luther King Jr. Birthday, Good Friday, Memorial Day, Independence Day, Labor Day, Election Day, Veterans Day, Thanksgiving Day, Day after Thanksgiving, Christmas Eve, Christmas Day, New Year's Eve and New Year's Day. The Contractor shall be responsible for confirming with the City Engineering Division, 9th Floor, Cadillac Tower Building, any amendments to this list of calendar dates designated as holidays for City of Detroit employees.

The Engineer may require the contractor to cease construction operations during times as may be determined to be in the interest of the public at no additional compensation or cost to the City.

Contractor shall suspend or limit their operations if work interfere with the City Sponsors Public events within project CIA (Construction Influence Area) at no additional compensation or cost to the City.

The Contractor may normally prosecute the work during the entire twenty-four (24) hours of any work day stated above, provided that he so conducts his operations as not to create a public nuisance nor disturb the peace. Operations outside normal working hours must be conducted in accordance with Local Ordinances, as outlined in Subsection 107.01 of the 2012 MDOT Standard Specifications for Construction.

CITY OF DETROIT
NOTICE TO BIDDER
FOR
UTILITY COORDINATION

Page 1 of 3

DET:

Revised: 01-26-2012

The contractor shall cooperate and coordinate construction activities with the owners of utilities as stated in Section 104.08 of the 2012 Michigan Department of Transportation (MDOT) Standard Specifications for Construction. In addition, for the protection of underground utilities, the contractor shall follow the requirements in Section 107.12 of the 2012 MDOT Standard Specifications for Construction. Contractor delay claims, resulting from a utility, will be determined based upon Section 108.08 of the 2012 MDOT Standard Specifications for Construction.

The existing utilities listed below and shown on the plans represent the best information available as obtained on our surveys.

This information does not relieve the Contractor of the responsibility to satisfy himself as to its accuracy, or of his responsibility in case utilities have been constructed or removed since the most recent surveys.

NAME AND ADDRESS OF OWNER

KIND OF UTILITY

Miss Dig

Call three (3) working days before you dig
1-800-482-7171

All Underground Utilities

City of Detroit

Public Lighting Authority

9449 Grinnell

Detroit, MI 48213

Emergency 24 Hour service (313) 224-0500

Carolyn Davis (313) 267-7270

Street Lighting and Traffic Signals

City of Detroit

Detroit Water & Sewerage Department

J Madison Bldg.

1420 Washington Blvd.

Detroit, MI 48226

Gang Song (313) 967-1508

Fax (313) 964-9560

Emergency (313) 267-7401

Email: song@dwsd.org

Inspector

Water Mains & Sewers

DET: MCS

Revised: 01-26-2012

NAME AND ADDRESS OF OWNERKIND OF UTILITY

City of Detroit
Traffic Engineering, D.P.W.
 2633 Michigan Avenue
 Detroit, MI 48207

Pavement Markings, Signs & Traffic Signals

Jubi Chackunkal (313) 224-1315
Jubcha@detroitmi.gov

Kirit Patel (313) 628-5641
patelki@detroitmi.gov

Sign Shop
 2425 Fenkell
 Detroit, MI 48238
 Willie Riley (313) 628-2923
 Fax (313) 628-4966

Sign Removals & Installations

City of Detroit
Detroit Fire Department
 250 W. Larned
 Detroit, MI 48226
 Chief Derek Segars (313) 224-1311
 Fax (313) 224-1908

Fire Call Boxes and Fire Hydrants

City of Detroit
Detroit Police Department
 1300 Beaubien
 Detroit, MI 48226
 (313) 224-4400

Police Call Boxes

DTE, Detroit Edison
 One Energy Plaza
 IGS Group, 518SB
 Detroit, MI 48226
 Robin O'Connell (313) 235-5632
 Fax (313) 235-9366
 (313) 237-9564

Electric Power

Exposed or Damaged Facilities

CITY OF DETROIT
SPECIAL PROVISIONS

1 of 3

DET: UP

Revised: 07-28-14

WORK APPROVALS

Acceptance by the **City Of Detroit** of any or all Utility work under this contract will be conditioned upon approval by the appropriate Department of the City of Detroit.

UTILITY ACCESS

The contractor shall contact the utility owners, including the Detroit Fire and Police Departments regarding their facilities prior to starting the work. All utilities outlets and control fixtures shall be maintained in an accessible condition at all times.

ADJACENT UTILITIES

When proposed utilities cross or lay parallel to an existing or proposed utility, a vertical clearance of 12 inches and horizontal clearance of 42 inches shall be provided between the outside limits of their construction and the outside limits of the PLD or DWSD facility. PLD facilities include electrical conduits, communication conduits, and related structures. DWSD facilities include sewers, water mains, and related structures. If for any reason this clearance cannot be provided, the contractor shall notify the project engineer and proceed under his direction in an approved manner.

RECLAIMING SALVAGABLE MATERIAL

All salvageable material within the limits of this project and belonging to either privately or municipally owned utilities, which are to be reclaimed by its owner, will be indicated on the plans or in the proposal. The removal of such material shall be done by the owner and at their own expense and at such time as will cause no delay to the Contractor. If after due notice the owner does not remove the material, the Engineer shall advise the Contractor to remove the material and this material shall become the property of the Contractor. The work of removing the material is included in the construction of the project and will not be paid for separately

HYDRANTS AND WATER

The Contractor shall pump out at the end of each day throughout the year, regardless of the season, any fire hydrant used to obtain water.

The Contractor shall secure the required permit from the Detroit Fire Department, Detroit Water and Sewerage Department, and shall bear all the expense for such permit and for the water used. If connections are made to hydrants, Fire Department's standard hydrant wrench shall be used for the operation of the hydrant.

CONTACT AND PERMIT FEES FOR HYDRANT AND WATER USAGE

Fire Department requires a fee deposit of two hundred dollars (\$200) and forty dollar per day (\$40/day) for hydrant usage. Contact information: (313) 596-2975.

Water And Sewerage Department current fee is fourteen dollars and forty-two cents per cubic feet (\$14.42/ Cu. ft). Contact information: (313) 245-1057.

USE OF BALL TYPE PAVEMENT BREAKER FOR REMOVAL OF MISCELLANEOUS STRUCTURES

The use of a crane and ball type pavement breaker for the removal of miscellaneous structures referred to in Section 204 of the 2003 Standard Specifications and the removal of other items called for in these Supplemental Specification will **NOT** be permitted at any time for work under this Contract, except when specifically authorized by the Engineer.

PUMPING AND DRAINAGE

The Contractor will be required to furnish all equipment and supplies and perform all labor necessary to keep all excavated areas dewatered during the period of his contract.

The work will include the disposal of all drainage water flowing into the excavation. The drainage of the entire project shall be disposed of in a manner that will not interfere with or delay the work of others. This work shall be performed as directed by the Engineer.

The City will permit, subject to its approval, drainage water from the excavations for the project to enter existing operating sewers without reimbursement. No claims for damages, however, will be allowed the Contractor because of the inadequacy of the City sewers to accommodate the water from the excavations.

All sewers and drainage structures shall be kept thoroughly cleaned of silt, debris and foreign matter, and shall be free from such accumulation at the time of final inspection.

PUMPING AND DRAINAGE, (cont'd.):

The work of pumping and cleaning the structures specified will be considered included to the construction of the project and no additional payment will be made therefor.

PROPERTY AND SURVEY MONUMENTS

Before any monuments or stakes marking the boundaries of property along or near the work are removed or disturbed, the Contractor shall notify the Engineer in sufficient time so that they can be properly located and reset.

All precautions shall be taken to avoid disturbance of permanent survey monuments of any City, County or State authority, and when any of these are disturbed or destroyed, the Contractor shall restore them to the satisfaction of such authority and shall pay all costs incurred by such authority in connection therewith.

CLEANLINESS OF THE WORK

The Contractor shall at all times keep the street pavement and right-of-way and any public or private premises temporarily occupied by him for purposes of work under this contract free from accumulations of waste material or rubbish caused by his employees or the work. The requirement shall apply to any streets in vicinity of the work which are affected by the Contractor's construction or hauling operations, as well as to streets in which the work is located. If the Contractor shall fail to keep any street cleaned of debris resulting from his operations, and therefore shall create any public nuisance, he shall be notified in writing by the Engineer to clean the street and remove the nuisance immediately. If, within 24 hours after the receipt of such notice, the contractor shall fail to clean such street satisfactorily, the Engineer shall order the street cleaned by the Department of Public Works or such other agency as he shall designate and all costs of such cleaning shall be paid by the Contractor.

Materials and equipment not in current use shall not be stored on any city streets. Storage of materials on private property shall require a written agreement with the owner. The Contractor shall provide the Engineer a copy of the agreement.