Appendix 400.2

Signal Timing Sheets - How to Complete

(Naztec 980)
Ministry of Transportation & Infrastructure

Traffic Signal Timing Sheets
How to Complete
(Naztec 980)

April 2013

Version 1

Maintained by:

South Coast Region
Ministry of Transportation & Infrastructure
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1. Introduction

This document should be used as a guideline for completing the Ministry standard Naztec Traffic Signal Timing Sheet. Only qualified professional engineers familiar with the Ministry Traffic and Electrical Engineering Standards manual and associated Technical Bulletins should complete this form.

The Ministry uses Naztec 981 traffic controller units supplied by Naztec, Inc and installed in Ministry specific traffic controller cabinets to operate traffic signals. The equipment is sophisticated and requires expert knowledge and skills to correctly program and implement in the field. The Naztec 981 manual has numerous pages of programming information that must be correctly entered in each field controller.

Responsibility for traffic signal timing configuration and programming is divided into two groups – (1) Project Traffic Engineer and the Ministry Regional Traffic Engineer (RTE) and (2) Regional Electrical Maintenance Contractor and the Ministry Manager, Electrical Services (MES). The RTE and the MES will review and monitor the operations undertaken by the Project Traffic Engineer and the Electrical Maintenance Contractor.

The Project Traffic Engineer is responsible for performing the capacity analysis and determining the appropriate phasing and timing to use at intersections. They are also responsible for preparing coordination timing plans (via Synchro analysis) and identifying all of the special requirements such as pre-emption, detection delays, etc. The RTE uses the Ministry Traffic and Electrical Engineering Manual as their standard for developing timing plans.

The Regional Electrical Maintenance Contractor is responsible for programming the traffic controller units and configuring the traffic controller cabinet to ensure that the traffic signal will operate as desired by the Project Traffic Engineer. The Electrical Maintenance Contractor interprets the information provided by the Project Traffic Engineer into appropriate programming and configuration of the controller. The Project Traffic Engineer uses the Naztec 981 Programming manual and the MoTI Traffic Controller Design Manuals as their standard for programming and configuring the controller units. The Programming Manual outlines in detail the default values for many of the controller parameters.

To ensure that the operation that is being desired by the Project Traffic Engineer is correctly interpreted by the Electrical Maintenance Contractor, the Ministry has established a Traffic Signal Timing Sheet format that allows the Project Traffic Engineer to relay their requirements in a clear and concise manner to the Electrical Maintenance Contractor.
2. The Timing Sheets

The Ministry has developed several excel workbooks to capture the majority of traffic controller configurations. The workbooks are available in the previous Signal Timing Sheets How to Complete (LMD8000/9200).

1. NEMA DUAL RING
2. SEQUENTIAL
3. 4 PLUS 2 OVER 2
4. 2 OVER 2 PLUS 4
5. LEAD/LAG
6. PEDESTRIAN

This version of “Signal Timing Sheets - How to Complete” will cover the Naztec 981 and only provides one Signal Timing Sheet (Nema Dual Ring), which can be modified to suit all applications listed above.

Traffic Signal Timing Sheet designers shall choose the appropriate workbook to use depending on what configuration they are using as per the Traffic and Electrical Engineering Manual standards. It should be noted that NEMA DUAL RING is the preferred configuration option; however this sequence may not be possible for some new and existing configurations.

The Naztec workbook is divided into two worksheets as follows:

1. SIGNAL TIMING SHEET
2. CALCULATION SHEET

The SIGNAL TIMING SHEET contains the information required to program the controller on a single sheet of paper.

The CALCULATION SHEET contains the information required to calculate the clearance and advance warning times for the phases. This sheet contains information related to speed limits, clearance distances, approach grades, conflict distances, etc, which are typically a constant once the signal is in operation.

3. Where do I Start?

The workbook has been specifically created so that the information entered on one sheet is generally automatically passed on to the other sheets as required. Typically the information that needs to be filled on a worksheet has been shaded yellow. All other cells are either labels or automatically generated from other cells or worksheets.
As a first step, the designer shall mark-up a photocopy of the proposed traffic signal layout drawing showing all pavement markings and signal head locations. This drawing shall clearly indicate the paths and measurements that are to be used in the development of the timing sheet (clearance and conflict distances). This sheet shall be submitted along with the timing sheet itself to the Ministry.

If you are preparing a timing sheet for the first time (or the existing timing sheet does not conform to the current format), the following is the preferred order of completing the workbook:

a) Prepare a marked up site plan showing the distances to be used for clearance and conflict distances as per the Traffic and Electrical Engineering manual.
b) Complete the general information on the SIGNAL TIMING SHEET (Date issued, Intersection, location, sheet number and revision, phase setting, description, function, and overlap sections)
c) Complete the speed and distance information on the CALCULATION SHEET (posted speed, approach grade, clearance distance, conflict distance, walking speed, walking distance, approach speed, clearance speed, conflict speed, and advance warning distance)
d) Return to the SIGNAL TIMING SHEET and complete the remaining sections that are not automated fields.

You should now have a completed timing sheet that must be signed and sealed by the traffic engineer of record prior to submission to the Ministry. The Ministry shall initial the sheet to indicate they have received and distributed the timing sheet to the appropriate MoTI personnel.

**Warning**: the Ministry does not perform reviews or quality checks on consultant timing plans. Consultants are advised to ensure that they are qualified and have appropriate quality management plans for the development and review of the timing plans. In the event of an incident due to improperly timed traffic signals, the consultant shall be responsible for all costs associated with the incident via their errors and omissions insurance.

**Warning**: The workbook provided has not been confirmed for accuracy. It is the responsibility of the consultant to confirm all formulas and ensure final submissions conform to Ministry, local and national standards. Errors in the spreadsheets should be forwarded to the Regional Traffic Engineer in South Coast Region.
4. The Details

This section describes in detail the various fields in the Traffic Signal Timing Plan Workbook.

**WORKSHEET: SIGNAL TIMING SHEET**

a) **Date Issued** – enter the current date in the format *February 5, 2012*
b) **Controller Type** – currently this will be a Naztec 981 unless otherwise indicated by the RTE.
c) **Cabinet Type** – enter the cabinet type. Options include S-Rack, M-Rack, P, and M-Shelf. New controllers shall always be either P6 or S-Rack. For existing cabinets, confirm with the RTE as to status and future requirements.
d) **Sequence** – enter the appropriate SEQUENCE. Typically NEMA DUAL RING should be used. If the NEMA DUAL RING sequence is not appropriate, refer to the Traffic and Electrical Engineering Manual for alternate signal sequences. In particular note that for geometric conflicts for opposing left turns, the controller sequence must be sequential for that side of the barrier (i.e. you must use a 2 OVER 2 PLUS 4, or 4 PLUS 2 OVER 2 sequence).
e) **Intersection** – enter the intersection location in the format MAIN STREET NAME @ MINOR STREET NAME
f) **Location** – enter the city name
g) **Sheet Number & Revision** – enter the electrical drawing series, sheet number and revision of the 1:250 site plan for the signal in the format *TE-89106-10A.*
h) **Phase Setting** – enter ON for each phase that will be active. Enter OFF in all other fields.
i) **Description** – Enter the description of the phase in the following format:
   - Highway 19
   - NB LT
   - EMERG. PREEMPT #
   - RAIL CLEARANCE

Note that the first lines should indicate the Street Name; the next lines should contain the direction and any movement (northbound left turn, etc.); and the following lines should contain any reference to Emergency or Railway preemption as appropriate.
j) **Function** – Enter the phase letter designation as per the Traffic and Electrical Engineering Manual standards (A1, B1>, Ay, C, etc.)
k) **Overlap** – Enter the phase letter designation for any overlap movements including any pedestrian overlaps. (A1, B1>, Ay, C, PA3, etc.)
i) **Minimum Green Time** – this information shall be entered manually, the user shall refer to the Traffic and Electrical Engineering manual for applicable MoTI standards.

m) **Passage** – this information is automatically entered, however the Traffic designer shall select the most appropriate times based on field conditions. See the Traffic and Electrical Engineering Manual for further information.

n) **Yellow** – this information is automatically calculated from the CALCULATION SHEET and is the yellow portion of the intergreen clearance period for each phase.

o) **Red** – this information is automatically calculated for the CALCULATION SHEET and is the red portion of the intergreen clearance period for each phase.

p) **Max 1/Max 2** – this information must be entered by the traffic designer. The Max 1 is the default maximum green value for each phase as calculated through a Synchro analysis. Max 1/2 is superceded by any ALT TIMING PLAN(s) in effect during that portion of the day. MAX 2 provides an alternative maximum plan for use at other time periods.

q) **Alt Timing Plan (1,2,3,4) MAX I/II** – these maximum green times shall only reference green times related to a specific TIME OF DAY plan listed at the bottom of the sheet. Previously this section would also list the green times associated with coordinated splits, however all coordinated green times should be incorporated into the split table at the bottom of the sheet. These values should match the green times listed in the TIME CLOCK SETTINGS under ALT PLAN 1 TO 4.

r) **Walk** – this information is automatically entered from the CALCULATION SHEET and represents the amount of Walk time required for the phase. Refer to the Traffic and Electrical Engineering Manual for appropriate walk intervals.

s) **Pedestrian Clearance** - this information is automatically entered from the CALCULATION SHEET and represents the amount of Pedestrian Clearance or flashing Don’t Walk time required for the phase. Refer to the Traffic and Electrical Engineering Manual for appropriate walk intervals.

t) **Recall** – this field indicates the type of recall for each phase. Options include OFF, EXT, MAX, CNA1. The field should be set to OFF for any movements that are not the resting phases; EXT for resting phases; MAX for movements with no actuation (pushbuttons or loops); CNA1 for pedestrian signals (see Traffic and Electrical Engineering Manual).

u) **Memory** – this field allows a call to be placed in the controller and locked in until that phase is serviced. It is used on occasion when vehicles consistently stop past the stop bar which does not allow a call to be placed to the controller. For most applications this should be set to OFF.

v) **Coordination Phase** – mark an XXXX in the phases that are coordinated if applicable. Typically these would be the main street movements.

w) **First Green Display** – mark an XXXX in the first serviceable phase after the signal comes out of flash. The FIRST GREEN DISPLAY would typically be the first through movement(s) on the cross street. Note that on
earlier timing sheets, the term FOP or Full Operation Point was used which is the phase before the FIRST GREEN DISPLAY (when using older timing sheets, corrections must be made to reflect FIRST GREEN DISPLAY).

x) **Intersection Flash** – this is the flashing operation of the signal when a malfunction has occurred or the signal is first powering up. Typically for Urban locations, the intersections flash all red. Rural locations usually flash yellow on the main street and red on the cross street. The Yellow flash is typically only used for simple phasing arrangements (2 or 3 phase) with no fully-protected left turns and usually no more than a three lane cross section on any roadway.

y) **AWF Time** – this is the advance warning time. This information should be automatically calculated, rounded up and inserted from the CALCULATION SHEET. This field indicates the total amount of advance warning time that should be allocated to each phase. If concurrent phases that terminate simultaneously have advance warning times that differ these values should remain as calculated (See Traffic and Electrical Engineering Manual).

z) **Delay Detection Timing** – this section identifies any delays or extensions that need to be added to any specific loops as per the Traffic and Electrical Engineering Manual. Typical delays and how they should be listed include:

a. Left Turn Clip  L5, L6 - 3 SEC LT CLIP
b. Right Turn Clip  L4 - 3 SEC RT CLIP
c. Advance Left Turn  L8 - 10 SEC ALT
d. Right Turn  L2 - 5 SEC RT
e. Advance Loops  L12, L13 - 5 SEC EXT
f. Queue Loops  L1, L3 - 5 SEC QUEUE

Note that all protected permissive left turn movements (advanced left turns) on the MAIN STREET must have a 10-second delay per c) above.

aa) **Pre-Emption Type** – this section is used to identify the type of emergency preemption equipment being used. Options include SONIC (sound activated), OPTICOM (Strobe activated), EMTRAC (radio activated) and Direct (tied to a fire hall or municipal preemption system such as in Richmond) as well as others. Enter the appropriate type.

bb) **Delay Time** – enter the amount of time that the Ministry controller should wait to initiate preemption phasing once a call has been received from the preemption system. This is typically used for direct connections tied to a fire hall, however the emergency department should be advising of any delay time requirements. If there is no delay time enter 0.

cc) **Pre-Emption Time** – this is the length of time that the preemption will be in effect once the controller has cycled to the appropriate phase. This feature is typically used for direct connections tied to a fire hall and for some older systems. For newer systems that preempt the signal for as
long as the sensors are activated such as Opticom and SONIC Systems enter “Sensor Actuated” in this field.
dd) **Volume Logging and MOES** – the ministry controllers log traffic volumes and some measures of effectiveness. This field should be set to **ON 15 MIN** which means the controller will perform volume counts and record MOES 24 hours per day at 15 minute intervals.
e) **Programming Comments** – these comments are meant to assist the Regional Electrical Maintenance personnel in programming the controller specifically for the site. Typically comments are related to railway preemption parameters but may include items such as:
   a. **ENABLE SIMULTANEOUS GAP** – PASSAGE CAN RESET
   b. **RR PRE-EMPTION ENTRY PHASE MINIMUM GREEN = 4.0 SECS**
   c. **STEP 1 OF RR / EMERGENCY PRE-EMPTION IS ALL RED = 2.0 SECS.**
   d. **STEP 2 OF RR PRE-EMPTION IS PHASE B1 & B1-> GREEN = 22 SECS.**
   e. **STEP 3 OF RR PRE-EMPTION IS SERVICE PHASE A1 & A2.**
   f. "**NO LEFT TURN" SIGN ON DURING RR CLEARANCE & PRE-EMPTION.**

ff) **Operational Comments** – these comments are meant as information to assist future Regional Traffic Engineers when modifying the traffic signal timings. If there are more PROGRAMMING COMMENTS than space available, you may also use this section for additional comments. Typically comments in this section include:
   a. **SIGNAL COORDINATED WITH BRECHIN, HAMMOND BAY AND STEWART.**
   b. **CONTROLLER HAS TELEPHONE CONNECTION**
   c. **PEDESTRIAN WALKING SPEED 1.0 M/S DUE TO SCHOOL**
   d. **TIME FROM RR PRE-EMPTION CALL UNTIL RR LIGHTS FLASH = 17 SECS.**
   e. **TIME FROM RR PRE-EMPTION CALL UNTIL TRAIN CROSSES VALLEY DRIVE = 41 SECS.**

gg) **Time Clock Settings** – this field is used for coordination or individual TIME OF DAY plan information. The user will be required to fill in the appropriate sections base on the TIME OF DAY plan(s) or coordination plan(s) used.
hh) **Time of Day** – this field is manually entered based on the TIME OF DAY or coordination plan(s). The format of this field shall be in the 24 hour format (i.e. 06:00 – 13:00). This information represents the time of day at which the special function is required.
ii) **Day of Week** - this field is manually entered and reference the day(s) of the week the special function is required. The format of this field shall be in the format MON-FRI, SAT-SUN, etc.
jj) **Pattern # (1 to 48)** - the pattern number references the specific CYCLE, OFFSET and SPLIT associated with the coordinated plan.

kk) **Cycle Length** - this field is manually entered and shall indicate the cycle length for the associated coordination plan. This shall be set to ZERO if the controller is running in FREE operation.

ll) **Offset Value** - this field is manually entered and shall indicate the offset value associated with the coordinated plan. If the controller is running in FREE operation, this field shall be merged with the SPLIT # field and shall say “NO COORDINATION”

mm) **SPLIT # (1 to 48)** – this field references the split number of the split table associated with the Pattern, Refer to oo) for split table information. If the controller is running in FREE operation, this field shall be merged with the OFFSET VALUE field and shall say “NO COORDINATION”

nn) **Max (I/II)** – This column will be filled in with I or II and will be used in conjunction with an ALT TIMING PLAN to reference a specific TIME OF DAY plan.

oo) **ALT PLAN 1 to 4** – This column will be filled in with the maximum green time to suit the TIME OF DAY plan used.

pp) **Split Table** – for coordination information. The user will be required to fill in the appropriate fields for each phase of the coordinated plan. By default there are 3 split tables on the sheet. If additional split tables are required they may be inserted below Split No. 3.

qq) **Time** – this field is manually entered and is the total split for a particular phase. Split times will be calculated as per the Traffic and Electrical Engineering Manual.

rr) **Max Reduce** – this field is used for signals that have Transit Signal Priority and shall only be used in conjunction with a coordination plan.

ss) **Max Extend** – this field is used for signals that have Transit Signal Priority and shall only be used in conjunction with a coordination plan. If MAX EXTEND is required at a traffic signal running in FREE mode, it shall be incorporated into the PROGRAMMING COMMENTS.

tt) **Coordination** – this field represents the phase(s) used as the offset reference and shall be indicated with “X”.

uu) **Mode** – this field indicates the recall settings programmed when the split table is active. Typically this will be set to MAX for the coordinated phase and NON for all un-coordinated phases.

vv) **Engineer of Record** – the professional engineer completing the traffic signal timing sheet shall sign, date and seal the timing plan in the appropriate location.

ww) **Received and Distributed by MoTI** – the MoTI Regional Traffic Engineer shall initial the timing plan when they have received and distributed the consultant prepared Traffic Signal Timing sheet. Note that the RTE does not perform quality audits or detailed review of the timing sheet. Responsibility for the content and any errors and omissions rests with the Engineer of Record.
The information at the top of this sheet is automatically populated from the TRAFFIC TIMING SHEET spreadsheet. The following describes the remaining fields that are entered or calculated on this spreadsheet.

a) **Posted Speed** – enter the posted speed of the roadway for each phase.
b) **Approach Grade** – enter the approach grade for the roadway on each phase.
c) **Clearance Distance** – enter the clearance distance associated with the phase (refer to the Traffic and Electrical Engineering Manual for details for through and left turn phases)
d) **Conflict Distance** – enter the conflict distance associated with the phase (refer to T & E Engineering manual for details for through and left turn phases)
e) **Walking Speed** – enter the walking speed for the pedestrian movements as per the Traffic and Electrical Engineering manual or sound engineering judgment. A comment should be made in the OPERATIONAL COMMENTS (Section ff) on the SIGNAL TIMING SHEET worksheet whether non-standard 1.2 m/s walking speeds are being used.
f) **Walking Distance** – enter the walking distance for each pedestrian movement.
g) **Approach Speed** – enter the approach speed as per the Traffic and Electrical Engineering Manual
h) **Clearance Speed** – enter the clearance speed as per the Traffic and Electrical Engineering Manual
i) **Conflict Speed** – enter the conflict speed as per the Traffic and Electrical Engineering Manual.
j) **Clearance Interval** – this is an automatically calculated clearance interval for the phase based on the previous geometric and site information. This represents the total yellow and red time for the phase.
k) **Yellow** – this is an automatically calculated value for the yellow portion of the CLEARANCE INTERVAL above and the appropriate red/yellow split clearance interval tables from the Traffic and Electrical Engineering Manual.
l) **Red** – this is an automatically calculated value for the red portion of the CLEARANCE INTERVAL above and the appropriate red/yellow split clearance interval tables from the Traffic and Electrical Engineering Manual.
m) **Ped Walk** – enter the amount of Walk time required for the phase. Refer to the Traffic and Electrical Engineering Manual for appropriate walk intervals.
n) **Ped Clear** – This is an automatically calculated value for the pedestrian clearance or “flashing don’t walk” based on the geometric and site conditions entered previously and the Traffic and Electrical Engineering Standards manual.
o) **AWF Distance** – This is an automatically calculated value for a typical AWF installation. Should a geometric conflict exist with this distance, then the value should be manually entered for the specific advance warning sign.

p) **AWF Time** – this is the advance warning time. This information is automatically calculated based on the geometric and operational site conditions entered previously as well as the Traffic and Electrical Engineering manual. This field indicates the total amount of advance warning time that should be allocated to each phase. This value may have a decimal; however, when it is automatically transferred to the SIGNAL TIMING SHEET it will be rounded up to the nearest whole number.

### 5. Wrapping Up

Once a timing sheet has been completed as per these guidelines, the engineer of record should:

a) print off a copy of all applicable sheets (do not print shading/colouring; set print to black and white under PAGE SETUP - SHEET options),
b) sign the first sheet,
c) Submit the signed and sealed copy to the Ministry RTE along with a digital version of the workbook and all Synchro files.

The engineer of record shall refer to the Traffic and Electrical Engineering manual Section 200 (and associated technical Bulletins) for further details on submitting traffic signal design documentation (folders) to the Ministry.

### 6. Summary of Requirements

Prior to submitting the Traffic Engineering Checklist to the Ministry for distribution, the consultant shall ensure that:

1) These guidelines have been followed in their entirety
2) A hard copy has been signed and sealed by the engineer of record (PDF acceptable)
3) A digital copy has been attached
4) A digital copy of all Synchro files has been attached
5) A hard copy of the proposed traffic signal pavement markings and signal displays clearly identifying the distances for all clearance and conflict distances used in the timing sheet calculations has been attached.(PDF acceptable)
Appendix A

Blank Traffic Signal Timing Sheet
NEMA DUAL RING
## SIGNAL TIMING SHEET

**Date Issued** | **Intersection**
--- | ---

**Controller Type** | **Location**
--- | ---

**Cabinet Type** | **Sheet Number & Revision**
--- | ---

### Phase Number

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
</table>

### Phase Setting

|   | OFF | OFF | OFF | OFF | OFF | OFF | OFF | OFF |

### Description

### Function

### Overlap

### Minimum Green

### Passage

### Yellow

### Red

<table>
<thead>
<tr>
<th></th>
<th>Max 1/Max 2</th>
<th>ALT Timing Plan (1,2,3,4) Max I</th>
<th>ALT Timing Plan (1,2,3,4) Max II</th>
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### Walk

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### Pedestrian Clear

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### Recall

### Memory

### Coordination On Phase

### First Green Display

### Intersection Flash

### AWF Time [s]

### Delay Detection Timing

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<tbody>
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<td>2</td>
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<td>3</td>
<td></td>
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<tr>
<td>4</td>
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</table>

### Pre-Emption Type

### Operational Comments

### Delay Time

### Pre-Emption Time

### Volume Logging And Moes

### Time Clock Settings

<table>
<thead>
<tr>
<th>Time Of Day</th>
<th>Day Of Week</th>
<th>Pattern # (1 To 48)</th>
<th>Cycle Length</th>
<th>Offset Value</th>
<th>Split # (1 To 32)</th>
<th>Max I (1 To 8)</th>
<th>Alt Plan 1 To 4</th>
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### Additional Time Clock Information

### Split Table

#### SPLIT TABLE

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<th>6</th>
<th>7</th>
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<table>
<thead>
<tr>
<th></th>
<th>Time</th>
<th>Max Reduce</th>
<th>Max Extend</th>
<th>Time</th>
<th>Max Reduce</th>
<th>Max Extend</th>
<th>Time</th>
<th>Max Reduce</th>
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### Engineer Of Record

### Date

### Received & Distributed By Moti

### Date

### Date Implemented
Appendix B

Sample Traffic Signal Timing Sheet
NEMA DUAL RING
**SIGNAL TIMING SHEET**

<table>
<thead>
<tr>
<th>DATE ISSUED</th>
<th>April XX, 201X</th>
<th>INTERSECTION</th>
<th>HIGHWAY X AND CROSS STREET</th>
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<tbody>
<tr>
<td>CONTROLLER TYPE</td>
<td>NAZTEC 980</td>
<td>LOCATION</td>
<td>SOMEWHERE</td>
</tr>
<tr>
<td>CABINET TYPE</td>
<td>PG</td>
<td>SHEET NUMBER &amp; REVISION</td>
<td>TE-XXXX XX</td>
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<tr>
<td>SEQUENCE</td>
<td>NEMA DUAL RING</td>
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**Phase Number**

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<td>EMERGENCY</td>
<td>PRE-EMPTION #4</td>
<td>EMERGENCY</td>
</tr>
</tbody>
</table>

**Overlap**

- Minimum Green: 6, 10, 7, 6, 10, 7
- Passage: 3.0, 4.4, 5.0, 3.5, 4.4, 5.0
- Yellow: 3.7, 4.4, 5.0, 3.5, 4.4, 5.0
- Red: 1.0, 1.0, 1.0, 1.0, 1.0, 1.0
- Max 1/Max 2: 11, 42, 21, 11, 42, 21
- Alt Timing Plan (1, 2, 3, 4) Max I: 18, 35, 21, 9, 44, 21
- Alt Timing Plan (1, 2, 3, 4) Max II: |

**Walk**

- On: 7, 17, 20, 13, 21
- Off: |

**Recall**

- On: |
- Off: |

**Coordination on Phase**

- On: |
- Off: |

**First Green Display**

- Yellow: XXXX
- Red: XXXX

**Intersection Flash**

- Yellow: XXXX
- Red: XXXX

**AWT Time [s]**

- G/U: 6.0

**Delay Detection Timing**

- L14 - 15 Seconds (RT): |
- L4, L5, L12, L13 - 10 Seconds (LT): |
- L8, L17 - 3 Seconds (LT Clip)

**Additional Time Clock Information**

<table>
<thead>
<tr>
<th>Time of Day</th>
<th>Pattern #</th>
<th>Cycle Length</th>
<th>Offset Value</th>
<th>Split #</th>
<th>Max Reduce</th>
<th>Max Extend</th>
<th>Alt Plan 1</th>
<th>Alt Plan 2</th>
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<tbody>
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<td>SAT - SUN</td>
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<td>0</td>
<td>NO COORDINATION</td>
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**Additional Time Clock Information**

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</table>

**Engineer of Record**

- Date |

**Received & Distributed by MOTI**

- Date |

**Date Implemented**

- Mode | NON | NON | NON | NON | NON | NON | NON | NON

**Comments**

- Programmed
- Additional Time Clock Information

**Phase Setting**

- On: |
- Off: |