CHANGE NOTICE Affected Document: IRN/SCN Number Date: ICD-GPS-240 Rev B IRN-ICD-240B-001 28-NOV-2018 Authority: Proposed Change Notice Date: RFC-00374 ICD240B_RFC374 28-SEP-2018

CLASSIFIED BY: N/A DECLASSIFY ON: N/A

Document Title: NAVSTAR GPS Control Segment to User Support Community Interfaces

RFC Title: 2018 Proposed Changes to the Public Documents

Reason For Change (Driver):

The following topic was deferred from the 2017 Public ICWG and will now be resolved by this RFC.

Currently the Operational Advisories (OAs) that are published and archived contain plane/slot descriptions that
are not in the constellation definition provided to the public in the Standard Positioning Service (SPS)
Performance Standard (PS). The OA does not have the capability to correctly publish information regarding
fore/aft position since moving to the 24+3 constellation with three expanded slots. In addition, the Points of
Contact of the OA are not represented in a way that allows for efficient updates. This is a follow-up to RFC-351,
which was CCB-approved on 8-Jan-2018.

The following topic resolves 3 document clean-up related activities:

2. a) Signal-in-space topics need clarification, as identified by the public in past Public ICWGs. b) There were some administrative errors found during the UpRev process of the public documents. c) Contractor signatories are required for government-controlled documents.

(Pre-RFCs 819, 861)

Description of Change:

1. Modify the OA as agreed to in ICD-GPS-240 and ICD-GPS-870.

2. a) Provide clarity for the list of signal-in-space topics identified by the public. b) Clean up identified administrative changes in all public documents. c) Remove required contractor signatories from government-controlled documents.

Authored By: RE: Philip Kwan	Checked By: RE: Jennifer Lemus			
AUTHORIZED SIGNATURES	REPRESENTING	DATE		
Achar pisc	GPS Directorate Space & Missile Systems Center (SMC) – LAAFB	4 MAR 19		
	HQ Air Force Space Command (AFSPC/50 OG)			
	Department of Homeland Security (DHS), United States Coast Guard (USCG), Navigation Center (NAVCEN)			

DISTRIBUTION STATEMENT A: Approved For Public Release; Distribution is Unlimited

THIS DOCUMENT SPECIFIES TECHNICAL REQUIREMENTS AND NOTHING HEREIN CONTAINED SHALL BE DEEMED TO ALTER THE TERMS OF ANY CONTRACT OR PURCHASE ORDER BETWEEN ALL PARTIES AFFECTED.

Interface Control Contractor:
SAIC (GPS SE&I)
200 N. Pacific Coast Highway, Suite 1800
El Segundo, CA 90245
CODE IDENT 66RP1

CHANGE NOTICE					
Affected Document:	IRN/SCN Number	Date:			
ICD-GPS-240 Rev B	IRN-ICD-240B-001	28-NOV-2018			
Authority:	Proposed Change Notice	Date:			
RFC-00374	ICD240B_RFC374	28-SEP-2018			

CLASSIFIED BY: N/A DECLASSIFY ON: N/A

Document Title: NAVSTAR GPS Control Segment to User Support Community Interfaces

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1. Currently the Operational Advisories (OAs) that are published and archived contain plane/slot descriptions that are not in the constellation definition provided to the public in the Standard Positioning Service (SPS) Performance Standard (PS). The OA does not have the capability to correctly publish information regarding fore/aft position since moving to the 24+3 constellation with three expanded slots. In addition, the Points of Contact of the OA are not represented in a way that allows for efficient updates. This is a follow-up to RFC-351, which was CCB-approved on 8-Jan-2018.

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Authored By: RE: Philip Kwan	Checked By: RE: Jennifer Lemus				
AUTHORIZED SIGNATURES	REPRESENTING	DATE			
	GPS Directorate Space & Missile Systems Center (SMC) – LAAFB				
Adam (dwards	HQ Air Force Space Command (AFSPC/50 OG)	22 Feb 19			
	Department of Homeland Security (DHS), United States Coast Guard (USCG), Navigation Center (NAVCEN)				

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Interface Control Contractor:
SAIC (GPS SE&I)
200 N. Pacific Coast Highway, Suite 1800
El Segundo, CA 90245
CODE IDENT 66RP1

CHANGE NOTICE Affected Document: IRN/SCN Number Date: ICD-GPS-240 Rev B IRN-ICD-240B-001 28-NOV-2018 Authority: Proposed Change Notice Date: RFC-00374 ICD240B_RFC374 28-SEP-2018

CLASSIFIED BY: N/A DECLASSIFY ON: N/A

Document Title: NAVSTAR GPS Control Segment to User Support Community Interfaces

RFC Title: 2018 Proposed Changes to the Public Documents

Reason For Change (Driver):

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1. Currently the Operational Advisories (OAs) that are published and archived contain plane/slot descriptions that are not in the constellation definition provided to the public in the Standard Positioning Service (SPS) Performance Standard (PS). The OA does not have the capability to correctly publish information regarding fore/aft position since moving to the 24+3 constellation with three expanded slots. In addition, the Points of Contact of the OA are not represented in a way that allows for efficient updates. This is a follow-up to RFC-351, which was CCB-approved on 8-Jan-2018.

The following topic resolves 3 document clean-up related activities:

2. a) Signal-in-space topics need clarification, as identified by the public in past Public ICWGs. b) There were some administrative errors found during the UpRev process of the public documents. c) Contractor signatories are required for government-controlled documents.

(Pre-RFCs 819, 861)

Description of Change:

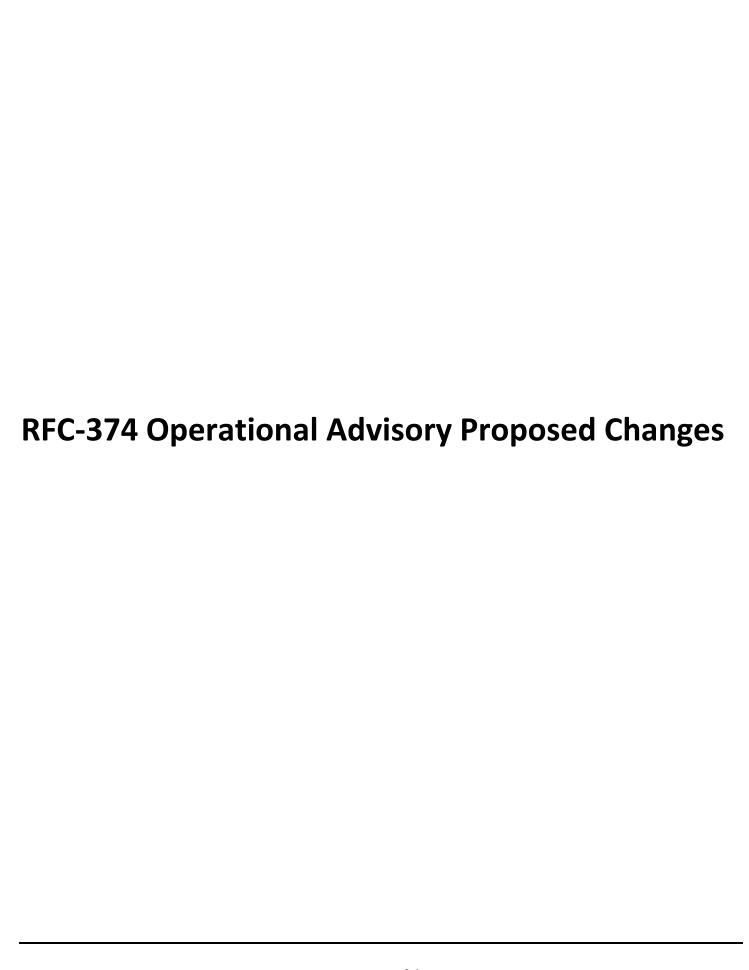
- 1. Modify the OA as agreed to in ICD-GPS-240 and ICD-GPS-870.
- 2. a) Provide clarity for the list of signal-in-space topics identified by the public. b) Clean up identified administrative changes in all public documents. c) Remove required contractor signatories from government-controlled documents.

Authored By: RE: Philip Kwan	Checked By: RE: Jennifer Lemus			
AUTHORIZED SIGNATURES	REPRESENTING	DATE		
	GPS Directorate Space & Missile Systems Center (SMC) – LAAFB			
	HQ Air Force Space Command (AFSPC/50 OG)			
GLANDER.MICHAEL. Digitally signed by WILLIAM.10156591 GLANDER.MICHAEL.WILLIAM.10 15659102 Date: 2019.02.28 16:01:26-05'00	Department of Homeland Security (DHS), United States Coast Guard (USCG), Navigation Center (NAVCEN)			

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THIS DOCUMENT SPECIFIES TECHNICAL REQUIREMENTS AND NOTHING HEREIN CONTAINED SHALL BE DEEMED TO ALTER THE TERMS OF ANY CONTRACT OR PURCHASE ORDER BETWEEN ALL PARTIES AFFECTED.

Interface Control Contractor:
SAIC (GPS SE&I)
200 N. Pacific Coast Highway, Suite 1800
El Segundo, CA 90245
CODE IDENT 66RP1



ICD240-336:

Insertion after ICD240-91, ICD240-92, ICD240-93, ICD240-94, ICD240-95:

"NANUs are used to notify users of scheduled and unscheduled satellite outages and general GPS information. The paragraphs that follow describe the different types of NANUs. The NANU descriptions are arranged into four groups, as follows:

- Scheduled outages
- Unscheduled outages
- General text message
- Others

,,

Section Number:

10.1.0-6

WAS:

N/A

Redlines:

<INSERTED OBJECT>

IS:

Users are advised that the Point of Contact (POC) information contained in the NANU samples are subject to change, specifically the Organization Name and Organization Primary Contact Information (i.e. Contact Website URI, Contact Email ID, Contact Telephone Number, and Contact DSN Telephone Number). The NANU examples include POC information that reflects the time of release of this ICD. However, users should refer to the POC information provided in the most recent NANUs for up-to-date information.

ICD240-115:

Section Number:

10.1.4.0-5

WAS:

```
NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYSSS
SUBJ: SVN XX (PRN XX) LAUNCH JDAY JJJ
       NANU TYPE: LAUNCH
1.
       NANU NUMBER: YYYYSSS
       NANU DTG: HHHHDDZ MMM 2007
        SVN: XX
        PRN: XX
        LAUNCH JDAY: JJJ
        LAUNCH TIME ZULU: HHHH
2. GPS SATELLITE SVN XX (PRN XX) WAS LAUNCHED ON JDAY JJJ A USABINIT NANU WILL BE SENT WHEN THE SATELITTE IS SET ACTIVE
3. POC: CIVIL NON-AVIATION - NAVCEN at 703-313-5900, HTTPS://WWW.NAVCEN.USCG.GOV,
    CIVIL AVIATION - FAA Satellite Operations Group at 540-422-4178, https://www.faa.gov/air traffic/nas/gps reports/,
    MILITARY - GPS Operations Center at HTTPS://GPS.AFSPC.AF.MIL/GPSOC, DSN 560-2541, COMM 719-567-2493,
    GPS_SUPPORT@SCHRIEVER.AF.MIL, HTTP://WWW.SCHRIEVER.AF.MIL/GPS,
    MILITARY ALTERNATE - JOINT SPACE OPERATIONS CENTER, DSN 276-9994, COMM 805-606-9994, JSPOCCOMBATOPS@VANDENBERG.AF.MIL
```

Figure 10-2 LAUNCH NANU Message Template

Redlines:

```
NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYSSS
SUBJ: SVN XX (PRN XX) LAUNCH JDAY JJJ
       NANU TYPE: LAUNCH
1.
        NANU NUMBER: YYYYSSS
        NANU DTG: HHHHDDZ MMM 2007
        SVN: XX
        PRN: XX
        LAUNCH JDAY: JJJ
        LAUNCH TIME ZULU: HHHH
2. GPS SATELLITE SVN XX (PRN XX) WAS LAUNCHED ON JDAY JJJ A USABINIT NANU WILL BE SENT WHEN THE SATELITTE IS SET ACTIVE
    TO SERVICE.
3. POC: CIVIL NON-AVIATION - NAVCEN at 703-313-5900, HTTPS://WWW.NAVCEN.USCG.GOV,
    CIVIL AVIATION - FAA Satellite Operations Group at 540-422-4178, https://www.faa.gov/air_traffic/nas/gps_reports/,
    MILITARY - GPS Operations Center at HTTPS://GPS.AFSPC.AF.MIL/GPSOC, DSN 560-2541, COMM 719-567-2493,
    GPS_SUPPORT@SCHRIEVER.AF.MIL, HTTP://WWW.SCHRIEVER.AF.MIL/GPS,
    MILITARY ALTERNATE - JOINT SPACE OPERATIONS CENTER, DSN 276-9994, COMM 805-606-9994, JSPOCCOMBATOPS@VANDENBERG.AF.MIL
    CIVIL NON-AVIATION - NAVCEN AT 703-313-5900, HTTPS://WWW.NAVCEN.USCG.GOV,
    CIVIL AVIATION - FAA NASEO AT 540-422-4178, HTTPS://WWW.FAA.GOV/AIR TRAFFIC/NAS/GPS REPORTS/,
    MILITARY - GPS OPERATIONS CENTER AT HTTPS://GPS.AFSPC.AF.MIL/GPSOC/, DSN 560-2541, COMM 719-567-2493,
    GPSOPERATIONSCENTER@US.AF.MIL, HTTP://WWW.SCHRIEVER.AF.MIL/GPS/,
    MILITARY ALTERNATE - COMBINED SPACE OPERATIONS CENTER, DSN 275-3522, COMM 805-605-3522,
    JSPOCCOMBATOPS@VANDENBERG.AF.MIL
```

Figure 10-2 LAUNCH NANU Message Template

NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYSSS SUBJ: SVN XX (PRN XX) LAUNCH JDAY JJJ NANU TYPE: LAUNCH NANU NUMBER: YYYYSSS NANU DTG: HHHHDDZ MMM 2007 SVN: XX PRN: XX LAUNCH JDAY: JJJ LAUNCH TIME ZULU: HHHH 2. GPS SATELLITE SVN XX (PRN XX) WAS LAUNCHED ON JDAY JJJ A USABINIT NANU WILL BE SENT WHEN THE SATELITTE IS SET ACTIVE TO SERVICE. 3. POC: CIVIL NON-AVIATION - NAVCEN AT 703-313-5900, HTTPS://WWW.NAVCEN.USCG.GOV, CIVIL AVIATION - FAA NASEO AT 540-422-4178, https://www.faa.gov/air_traffic/nas/gps_reports/, MILITARY - GPS OPERATIONS CENTER AT https://GPS.AFSPC.AF.MIL/GPSOC/, DSN 560-2541, COMM 719-567-2493, <u>GPSOPERATIONSCENTER@US.AF.MIL</u>, <u>HTTP://www.SCHRIEVER.AF.MIL/GPS/</u>,
MILITARY ALTERNATE - COMBINED SPACE OPERATIONS CENTER, DSN 275-3522, COMM 805-605-3522, JSPOCCOMBATOPS@VANDENBERG.AF.MIL

Figure 10-2 LAUNCH NANU Message Template

ICD240-117:

Section Number:

10.1.4.0-7

WAS:

```
NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYJJJ
SUBJ: SVNXX (PRNXX) DECOMMISSIONING JDAY JJJ/HHHH
      NANU TYPE: DECOM
      NANU NUMBER: YYYYSSS
      NANU DTG: HHHHDDZ MMM YYYY
      REFERENCE NANU: YYYYSSS
      REF NANU DTG: HHHHDDZ MMM YYYY
      SVN: XX
      PRN: XX
      UNUSABLE START JDAY: JJJ
      UNUSABLE START TIME ZULU: HHHH
      UNUSABLE START CALENDAR DATE: DD MMM YYYY
      DECOMMISSIONING START JDAY: JJJ
      DECOMMISSIONING START TIME ZWU: HHHH
      DECOMMISSIONING START CALENDAR DATE: DD MMM YYYY
2. CONDITION: GPS SATELLITE SVNXX (PRNXX) WAS UNUSABLE AS OF JDAY JJJ (DD MMM YYYY) AND REMOVED
FROM THE GPS CONSTELLATION ON JDAY JJJ (DD MMM YYYY) AT HHHH ZULU.
3. POC: CIVIL NON-AVIATION - NAVCEN at 703-313-5900, HTTPS://WWW.NAVCEN.USCG.GOV,
    CIVIL AVIATION - FAA Satellite Operations Group at 540-422-4178, https://www.faa.gov/air traffic/nas/gps reports/,
    MILITARY - GPS Operations Center at HTTPS://GPS.AFSPC.AF.MIL/GPSOC, DSN 560-2541, COMM 719-567-2493,
    GPS SUPPORT@SCHRIEVER.AF.MIL, HTTP://WWW.SCHRIEVER.AF.MIL/GPS,
    MILITARY ALTERNATE - JOINT SPACE OPERATIONS CENTER, DSN 276-9994, COMM 805-606-9994, JSPOCCOMBATOPS@VANDENBERG.AF.MIL
```

Figure 10-3 DECOM NANU Message Template

Redlines:

```
NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYJJJ
SUBJ: SVNXX (PRNXX) DECOMMISSIONING JDAY JJJ/HHHH
      NANU TYPE: DECOM
      NANU NUMBER: YYYYSSS
      NANU DTG: HHHHDDZ MMM YYYY
      REFERENCE NANU: YYYYSSS
      REF NANU DTG: HHHHDDZ MMM YYYY
      SVN: XX
      PRN: XX
      UNUSABLE START JDAY: JJJ
      UNUSABLE START TIME ZULU: HHHH
      UNUSABLE START CALENDAR DATE: DD MMM YYYY
      DECOMMISSIONING START JDAY: JJJ
      DECOMMISSIONING START TIME ZUU: HHHH
      DECOMMISSIONING START CALENDAR DATE: DD MMM YYYY
2. CONDITION: GPS SATELLITE SVNXX (PRNXX) WAS UNUSABLE AS OF JDAY JJJ (DD MMM YYYY) AND REMOVED
FROM THE GPS CONSTELLATION ON JDAY JJJ (DD MMM YYYY) AT HHHH ZULU.
    POC: CIVIL NON-AVIATION -- NAVCEN at 703-313-5900, HTTPS://WWW.NAVCEN.USCG.GOV,
    CIVIL AVIATION - FAA Satellite Operations Group at 540-422-4178, https://www.faa.gov/air traffic/nas/gps reports/,
    MILITARY - GPS Operations Center at HTTPS://GPS.AFSPC.AF.MIL/GPSOC, DSN-560-2541, COMM 719-567-2493,
    GPS_SUPPORT@SCHRIEVER.AF.MIL, HTTP://WWW.SCHRIEVER.AF.MIL/GPS,
    MILITARY ALTERNATE - JOINT SPACE OPERATIONS CENTER, DSN 276-9994, COMM 805-606-9994, JSPOCCOMBATOPS@VANDENBERG.AF.MIL
    CIVIL NON-AVIATION - NAVCEN AT 703-313-5900, HTTPS://WWW.NAVCEN.USCG.GOV,
    CIVIL AVIATION - FAA NASEO AT 540-422-4178, HTTPS://WWW.FAA.GOV/AIR TRAFFIC/NAS/GPS REPORTS/,
    MILITARY - GPS OPERATIONS CENTER AT HTTPS://GPS.AFSPC.AF.MIL/GPSOC/, DSN 560-2541, COMM 719-567-2493,
    GPSOPERATIONSCENTER@US.AF.MIL, HTTP://WWW.SCHRIEVER.AF.MIL/GPS/,
    MILITARY ALTERNATE - COMBINED SPACE OPERATIONS CENTER, DSN 275-3522, COMM 805-605-3522, JSPOCCOMBATOPS@VANDENBERG.AF.MIL
```

Figure 10-3 DECOM NANU Message Template

```
NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYJJJ
SUBJ: SVNXX (PRNXX) DECOMMISSIONING JDAY JJJ/HHHH
       NANU TYPE: DECOM
      NANU NUMBER: YYYYSSS
      NANU DTG: HHHHDDZ MMM YYYY
      REFERENCE NANU: YYYYSSS
      REF NANU DTG: HHHHDDZ MMM YYYY
      SVN: XX
      PRN: XX
      UNUSABLE START JDAY: JJJ
      UNUSABLE START TIME ZULU: HHHH
      UNUSABLE START CALENDAR DATE: DD MMM YYYY
      DECOMMISSIONING START JDAY: JJJ
      DECOMMISSIONING START TIME ZWU: HHHH
      DECOMMISSIONING START CALENDAR DATE: DD MMM YYYY
  CONDITION: GPS SATELLITE SVNXX (PRNXX) WAS UNUSABLE AS OF JDAY JJJ (DD MMM YYYY) AND REMOVED
FROM THE GPS CONSTELLATION ON JDAY JJJ (DD MMM YYYY) AT HHHH ZULU.
    POC: CIVIL NON-AVIATION - NAVCEN AT 703-313-5900, HTTPS://www.NAVCEN.USCG.GOV,
    CIVIL AVIATION - FAA NASEO AT 540-422-4178, HTTPS://WWW.FAA.GOV/AIR TRAFFIC/NAS/GPS REPORTS/,
    MILITARY - GPS OPERATIONS CENTER AT <a href="https://gps.afspc.af.mil/gpsoc/">https://gps.afspc.af.mil/gpsoc/</a>, DSN 560-2541, COMM 719-567-2493,
    GPSOPERATIONSCENTER@US.AF.MIL, HTTP://www.SCHRIEVER.AF.MIL/GPS/,
    MILITARY ALTERNATE - COMBINED SPACE OPERATIONS CENTER, DSN 275-3522, COMM 805-605-3522, JSPOCCOMBATOPS@VANDENBERG.AF.MIL
```

Figure 10-3 DECOM NANU Message Template

ICD240-125:

Section Number:

10.3.0-1

WAS:

The NANU message structure for all messages, except the General, LAUNCH and DECOM messages, is based on a tabular format that simplifies the readability of data. A template for these messages is illustrated in Figure 10-4. These messages are arranged into a header and three sections. The following paragraphs explain this message format in more detail.

```
NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYNNN
SUBJ: SVNxx (PRNXX) FORECAST OUTAGE JDAY JJJ/HHMM JDAY JJJ/HHMM
    NANU TYPE: FCSTDV
NANU NUMBER: YYYYNNN
     NANU DTG: DDHHMMZ MMM YYYY
     REFERENCE NANU: YYYYNNN
     REF NANU DTG: DDHHMMZ MMM YYYY
     SVN: XX
     PRN: XX
START JDAY: JJJ
START TIME ZULU: HHMM
     START CALENDAR DATE: DD MMM YYYY
STOP JDAY: JJJ
     STOP TIME ZULU: HHMM
     STOP CALENDAR DATE: DD MMM YYYY
    CONDITION: GPS SATELLITE SVNXX (PRNXX) WILL BE UNUSABLE ON JDAY JJJ
     (DD MMM YYYY) BEGINNING HHMMZULÙ UNTÍL JDAY JJJ (DD MMM YYYY) ENDING HHMM ZULU.
    POC: CIVIL NON-AVIATION - NAVCEN at 703-313-5900, HTTPS://WWW.NAVCEN.USCG.GOV,
     CIVIL AVIATION - FAA Satellite Operations Group at 540-422-4178, https://www.faa.gov/air_traffic/nas/gps_reports/,
    MILITARY - GPS Operations Center at HTTPS://GPS.AFSPC.AF.MIL/GPSOC, DSN 560-2541, COMM 719-567-2493,
     GPS SUPPORT@SCHRIEVER.AF.MIL, HTTP://WWW.SCHRIEVER.AF.MIL/GPS,
    MILITARY ALTERNATE - JOINT SPACE OPERATIONS CENTER, DSN 276-9994, COMM 805-606-9994, JSPOCCOMBATOPS@VANDENBERG.AF.MIL
```

Figure 10-4 NANU Message Template

Redlines:

The NANU message structure for all messages, except the General, LAUNCH and DECOM messages, is based on a tabular format that simplifies the readability of data. A template for these messages is illustrated in Figure 10-4. These messages are arranged into a header and three sections. The following paragraphs explain this message format in more detail.

```
NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYNNN
SUBJ: SVNxx (PRNXX) FORECAST OUTAGE JDAY JJJ/HHMM JDAY JJJ/HHMM
    NANU TYPE: FCSTDV
     NANU NUMBER: YYYYNNN
     NANU DTG: DDHHMMZ MMM YYYY
     REFERENCE NANU: YYYYNNN
     REF NANU DTG: DDHHMMZ MMM YYYY
     SVN: XX
    SYN: XX
PRN: XX
START JDAY: JJJ
START TIME ZULU: HHMM
START CALENDAR DATE: DD MMM YYYY
STOP JDAY: JJJ
STOP TIME ZULU: HHMM
     STOP CALENDAR DATE: DD MMM YYYY
    CONDITION: GPS SATELLITE SVNXX (PRNXX) WILL BE UNUSABLE ON JDAY JJJ (DD MMM YYYY) BEGINNING HHMMZULU UNTIL JDAY JJJ (DD MMM YYYY) ENDING HHMM ZULU.
    POC: CIVIL NON-AVIATION - NAVCEN at 703-313-5900, HTTPS://WWW.NAVCEN.USCG.GOV,
     CIVIL AVIATION - FAA Satellite Operations Group at 540-422-4178, https://www.faa.gov/air_traffic/nas/gps_reports/,
     MILITARY - GPS Operations Center at HTTPS://GPS.AFSPC.AF.MIL/GPSOC, DSN 560-2541, COMM 719-567-2493,
     GPS_SUPPORT@SCHRIEVER.AF.MIL, HTTP://WWW.SCHRIEVER.AF.MIL/GPS,
     MILITARY ALTERNATE - JOINT SPACE OPERATIONS CENTER, DSN 276-9994, COMM 805-606-9994, JSPOCCOMBATOPS@VANDENBERG.AF.MIL
     CIVIL NON-AVIATION - NAVCEN AT 703-313-5900, HTTPS://WWW.NAVCEN.USCG.GOV,
     CIVIL AVIATION - FAA NASEO AT 540-422-4178, HTTPS://WWW.FAA.GOV/AIR TRAFFIC/NAS/GPS REPORTS/,
     MILITARY - GPS OPERATIONS CENTER AT HTTPS://GPS.AFSPC.AF.MIL/GPSOC/, DSN 560-2541, COMM 719-567-2493,
     GPSOPERATIONSCENTER@US.AF.MIL, HTTP://www.SCHRIEVER.AF.MIL/GPS/,
     MILITARY ALTERNATE - COMBINED SPACE OPERATIONS CENTER, DSN 275-3522, COMM 805-605-3522, JSPOCCOMBATOPS@VANDENBERG.AF.MIL
```

Figure 10-4 NANU Message Template

IS:

The NANU message structure for all messages, except the General, LAUNCH and DECOM messages, is based on a tabular format that simplifies the readability of data. A template for these messages is illustrated in Figure 10-4. These messages are arranged into a header and three sections. The following paragraphs explain this message format in more detail.

```
NOTICE ADVISORY TO NAVSTAR USERS (NANU) YYYYNNN
SUBJ: SVNXX (PRNXX) FORECAST OUTAGE JDAY JJJ/HHMM+ JDAY JJJ/HHMM

1. NANU TYPE: FCSTDV
NANU NUMBER: YYYYNNN
NANU DTG: DDHHMMZ MMM YYYY
REFERENCE NANU: YYYYNNN
REF NANU DTG: DDHHMMZ MMM YYYY
SVN: XX
PRN: XX
START JDAY: JJJ
START TIME ZULU: HHMM
START CALENDAR DATE: DD MMM YYYY
STOP JDAY: JJJ
STOP JDAY: JJJ
STOP JDAY: JJJ
STOP TIME ZULU: HHMM
STOP CALENDAR DATE: DD MMM YYYY

2. CONDITION: GPS SATELLITE SVNXX (PRNXX) WILL BE UNUSABLE ON JDAY JJJ
(DD MMM YYYY) BEGINNING HHMMZULU UNTIL JDAY JJJ (DD MMM YYYY) ENDING HHMM ZULU.

3. POC: CIVIL NON-AVIATION - NAVCEN AT 703-313-5900, HTTPS://WWW.NAVCEN.USCG.GOV,
CIVIL AVIATION - FAA NASEO AT 540-422-4178, HTTPS://WWW.FAA.GOV/AIR TRAFFIC/NAS/GPS REPORTS/,
MILITARY - GPS OPERATIONS CENTER AT HTTPS://GPS.AFSPC.AF.MIL/GPSOC/, DSN-560-2541, COMM 719-567-2493,
GPSOPERATIONSCENTER@US.AF.MIL, HTTP://WWW.SCHRIEVER.AF.MIL/GPS/,
MILITARY ALTERNATE - COMBINED SPACE OPERATIONS CENTER, DSN 275-3522, COMM 805-605-3522, JSPOCCOMBATOPS@VANDENBERG.AF.MIL
```

Figure 10-4 NANU Message Template

ICD240-289:

Section Number:

10.3.4-2

WAS:

```
3. POC: CIVILIAN - NAVCEN AT 703-313-5900, HTTPS://www.NAVCEN.USCG.GOV
MILITARY - GPS OPERATIONS CENTER at HTTP://GPS.AFSPC.AF.MIL/GPSOC, DSN 560-2541,
COMM 719-567-2541, gps_support@schriever.af.mil, HTTPS://gps.afspc.af.mil
MILITARY ALTERNATE - JOINT SPACE OPERATIONS CENTER, DSN 276-9994,
COMM 805-606-9994, JSPOCCOMBATOPS@VANDENBERG.AF.MIL
```

Figure 10-11 Contact Information

Redlines:

```
8. POC: CIVILIAN - NAVCEN AT 703-313-5900, HTTPS://WWW.NAVCEN.USCG.GOV
MILITARY - GPS OPERATIONS CENTER AT HTTPS://GPS.AFSPC.AF.MIL/GPSOC, DSN 560-2541,
COMM 719-567-2541, gps_support@schriever.af.mil, HTTPS://GPS.AFSPC.AF.MIL
MILITARY ALTERNATE - JOINT SPACE OPERATIONS CENTER, DSN 276-9994,
COMM 805-606-9994, JSPOCCOMBATOPS@VANDENBERG.AF.MIL
CIVIL NON-AVIATION - NAVCEN AT 703-313-5900, HTTPS://WWW.NAVCEN.USCG.GOV,
CIVIL AVIATION - FAA NASEO AT 540-422-4178, HTTPS://WWW.FAA.GOV/AIR TRAFFIC/NAS/GPS REPORTS/,
MILITARY - GPS OPERATIONS CENTER AT HTTPS://GPS.AFSPC.AF.MIL/GPSOC/, DSN 560-2541, COMM 719-567-2493,
GPSOPERATIONSCENTER@US.AF.MIL, HTTP://WWW.SCHRIEVER.AF.MIL/GPS/,
MILITARY ALTERNATE - COMBINED SPACE OPERATIONS CENTER, DSN 275-3522, COMM 805-605-3522,
JSPOCCOMBATOPS@VANDENBERG.AF.MIL
```

Figure 10-11 Contact Information

```
3. POC: CIVIL NON-AVIATION - NAVCEN AT 703-313-5900, <a href="https://www.navcen.uscg.gov">https://www.navcen.uscg.gov</a>, CIVIL AVIATION - FAA NASEO AT 540-422-4178, <a href="https://www.faa.gov/AIR TRAFFIC/Nas/gps reports/">https://www.faa.gov/AIR TRAFFIC/Nas/gps reports/</a>, MILITARY - GPS OPERATIONS CENTER AT <a href="https://gps.afspc.af.mil/gpsoc/">https://gps.afspc.af.mil/gpsoc/</a>, DSN 560-2541, COMM 719-567-2493, <a href="mailtogs-geographic-base-state-align: gps-geographic-base-state-align: gps-geographic-base
```

Figure 10-11 Contact Information

ICD240-159

Section Number: 20.1.0-1

WAS:

The Operational Advisory (OA) message provides a summary of the satellite constellation status. An example is shown in Figure 20-1. The OA is arranged in three sections. The following paragraphs describe each section and subsection of the OA.

Redlines:

The Operational Advisory (OA) message provides a summary of the satellite constellation status. An example is shown in Figure 20-1. The OA is arranged in three sections. The following paragraphs describe each section and subsection of the OA. <u>Users are advised that the Point of Contact (POC) information contained in Section 3 of the OA samples are subject to change, specifically the Organization Name and Organization Primary Contact Information (i.e. Contact Website URI, Contact Email ID, Contact Telephone Number, and Contact DSN Telephone Number). The OA examples include POC information that reflects the time of release of this ICD. However, users should refer to the POC information provided in the most recent OAs for up-to-date information.</u>

IS:

The Operational Advisory (OA) message provides a summary of the satellite constellation status. An example is shown in Figure 20-1. The OA is arranged in three sections. The following paragraphs describe each section and subsection of the OA. Users are advised that the Point of Contact (POC) information contained in Section 3 of the OA samples are subject to change, specifically the Organization Name and Organization Primary Contact Information (i.e. Contact Website URI, Contact Email ID, Contact Telephone Number, and Contact DSN Telephone Number). The OA examples include POC information that reflects the time of release of this ICD. However, users should refer to the POC information provided in the most recent OAs for up-to-date information.

ICD240-160:

Section Number:

20.1.0-2

WAS:

```
UNCLASSIFIED
GPS OPERATIONAL ADVISORY 086.0A1
SUBJ: GPS STATUS 27 MAR 2XXX
1. SATELLITES, PLANES, AND CLOCKS (CS=CESIUM RB=RUBIDIUM)
A. BLOCK I : NONE
B. BLOCK II: PRNS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
        : SLOT B2, D1, C2, D4, B6, C5, A6, A3, A1, E3, D2, B4, F3, F1
  PLANE
         : RB, RB, CS, RB, RB, RB, RB, CS, CS, RB, RB, RB, RB
  CLOCK
  BLOCK II: PRNS 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28
  PLANE : SLOT F2, B1, C4, E4, C3, E1, D3, E2, F4, D5, A5, F5, A4, B3
  CLOCK
                RB, RB, RB, RB, RB, RB, RB, RB, CS, RB, RB, CS, RB
C. BLOCK III: PRNS 29, 30, 31, 32
  PLANE : SLOT C1, B5, A2, E5
                RB, RB, RB, RB
  CLOCK :
2. CURRENT ADVISORIES AND FORECASTS:
A. FORECASTS: FOR SEVEN DAYS AFTER EVENT CONCLUDES.
            MSG DATE/TIME
                              PRN TYPE
                                                 SUMMARY (JDAY/ZULU TIME START - STOP)
NANU
            261836Z MAR 2XXX 18 FCSTDV
2XXX022
                                                092/1600-093/0630
B. ADVISORIES:
                              PRN TYPE
            MSG DATE/TIME
                                                 SUMMARY (JDAY/ZULU TIME START - STOP)
NANU
C. GENERAL:
            MSG DATE/TIME
                               PRN TYPE
                                                 SUMMARY (JDAY/ZULU TIME START - STOP)
NANU
2XXX020
            202158Z MAR 2XXX
                                    GENERAL
                                                 /-/
2XXX021
            241836Z MAR 2XXX 32 LAUNCH
                                                 /-/
2XXX023
            262212Z MAR 2XXX
                                    GENERAL
                                                 /-/
3. REMARKS:
A. THE POINT OF CONTACT FOR GPS MILITARY OPERATIONAL SUPPORT IS THE GPS
OPERATIONS CENTER AT (XXX)XXX-XXXX OR DSN XXX-XXXX
B. CIVIL NON-AVIATION: FOR INFORMATION, CONTACT US COAST GUARD NAVCEN AT COMMERCIAL 703-
313-5900 24 HOURS DAILY AND INTERNET HTTPS://WWW.NAVCEN.USCG.GOV.
C. CIVIL AVIATION: FAA SATELLITE OPERATIONS GROUP AT 540-422-4178,
HTTPS://WWW.FAA.GOV/AIR TRAFFIC/NAS/GPS REPORTS/
D. MILITARY SUPPORT WEBPAGES CAN BE FOUND AT THE FOLLOWING
HTTPS://GPS.AFSPC.AF.MIL/GPS OR HTTPS://GPS.AFSPC.AF.MIL/GPSOC
```

Figure 20-1 Sample Operational Advisory

Redlines:

```
UNCLASSIFIED
GPS OPERATIONAL ADVISORY
                              086.0A1
SUBJ: GPS STATUS 27 MAR 2XXX
1. SATELLITES, PLANES, AND CLOCKS (CS=CESIUM RB=RUBIDIUM)
A. BLOCK I : NONE
B. BLOCK II : PRNS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
  PLANE : SLOT B2, D1, C2, D4, B6, C5, A6, A3, A1, E3, D2, B4, F3, F1
  CLOCK
                  RB, RB, CS, RB, RB, RB, RB, CS, CS, RB, RB, RB, RB
  BLOCK II: PRNS 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28
  PLANE : SLOT F2, B1, C4, E4, C3, E1, D3, E2, F4, D5, A5, F5, A4, B3
  CLOCK :
                 RB, RB, RB, RB, RB, RB, RB, RB, CS, RB, RB, CS, RB
C. BLOCK III: PRNS 29, 30, 31, 32
  PLANE : SLOT C1, B5, A2, E5
  CLOCK
           : RB, RB, RB, RB
2. CURRENT ADVISORIES AND FORECASTS:
                       FOR SEVEN DAYS AFTER EVENT CONCLUDES.
A. FORECASTS:
NANU
            MSG DATE/TIME
                              PRN TYPE SUMMARY (JDAY/ZULU TIME START - STOP)
2XXX022
         261836Z MAR 2XXX 18 FCSTDV 092/1600-093/0630
B. ADVISORIES:
            MSG DATE/TIME PRN TYPE
                                                 SUMMARY (JDAY/ZULU TIME START - STOP)
NANU
C. GENERAL:
NANU
             MSG DATE/TIME
                                PRN TYPE
                                                   SUMMARY (JDAY/ZULU TIME START - STOP)
2XXX020
           202158Z MAR 2XXX
                                     GENERAL
                                                   /-/
            241836Z MAR 2XXX 32 LAUNCH
                                                   /-/
2XXX021
             262212Z MAR 2XXX
2XXX023
                                     GENERAL
REMARKS:
A. THE POINT OF CONTACT FOR GPS MILITARY OPERATIONAL SUPPORT IS THE GPS
B. CIVIL NON-AVIATION: FOR INFORMATION, CONTACT US COAST GUARD NAVCEN AT
COMMERCIAL 703-313-5900 24 HOURS DAILY AND INTERNET
HTTPS://WWW.NAVCEN.USCG.GOV
C. CIVIL AVIATION: FAA SATELLITE OPERATIONS GROUP AT 540-422-4178,
HTTPS://CPS.AFSPC.AF.MIL/CPS OR HTTPS://CPS.AFSPC.AF.MIL/CPSOC
A. THE POINT OF CONTACT FOR GPS MILITARY OPERATIONAL SUPPORT IS THE GPS
OPERATIONS CENTER AT HTTPS://GPS.AFSPC.AF.MIL/GPSOC/, DSN 560-2541, COMM 719-567-2493,
GPSOPERATIONSCENTER@US.AF.MIL,
B. CIVIL NON-AVIATION - NAVCEN AT 703-313-5900, HTTPS://WWW.NAVCEN.USCG.GOV,
C. CIVIL AVIATION - FAA NASEO AT 540-422-4178, HTTPS://WWW.FAA.GOV/AIR TRAFFIC/NAS/GPS REPORTS/,
D. MILITARY ALTERNATE - COMBINED SPACE OPERATIONS CENTER, DSN 275-3522, COMM 805-605-3522,
JSPOCCOMBATOPS@VANDENBERG.AF.MIL
```

Figure 20-1 Sample Operational Advisory

```
UNCLASSIFIED
GPS OPERATIONAL ADVISORY
                                 086.0A1
SUBJ: GPS STATUS 27 MAR 2XXX
1. SATELLITES, PLANES, AND CLOCKS (CS=CESIUM RB=RUBIDIUM)
A. BLOCK I : NONE
B. BLOCK II: PRNS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
         : SLOT B2, D1, C2, D4, B6, C5, A6, A3, A1, E3, D2, B4, F3, F1
   CLOCK
                   RB, RB, CS, RB, RB, RB, RB, CS, CS, RB, RB, RB, RB
   BLOCK II : PRNS 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28 PLANE : SLOT F2, B1, C4, E4, C3, E1, D3, E2, F4, D5, A5, F5, A4, B3
                  RB, RB, RB, RB, RB, RB, RB, RB, CS, RB, RB, CS, RB
C. BLOCK III: PRNS 29, 30, 31, 32
   PLANE : SLOT C1, B5, A2, E5
   CLOCK
                   RB, RB, RB, RB
2. CURRENT ADVISORIES AND FORECASTS:
                       FOR SEVEN DAYS AFTER EVENT CONCLUDES.
A. FORECASTS:
NANU
             MSG DATE/TIME
                                  PRN TYPE
                                                  SUMMARY (JDAY/ZULU TIME START - STOP)
2XXX022
            261836Z MAR 2XXX
                                  18
                                      FCSTDV
                                                    092/1600-093/0630
B. ADVISORIES:
                                                    SUMMARY (JDAY/ZULU TIME START - STOP)
NANU
            MSG DATE/TIME
                                 PRN TYPE
C. GENERAL:
                                                     SUMMARY (JDAY/ZULU TIME START - STOP)
             MSG DATE/TIME
                                  PRN TYPE
2XXX020
             202158Z MAR 2XXX
                                       GENERAL
2XXX021
              241836Z MAR 2XXX
                                  32
                                     LAUNCH
              262212Z MAR 2XXX
2XXX023
                                       GENERAL
3. REMARKS:
A. THE POINT OF CONTACT FOR GPS MILITARY OPERATIONAL SUPPORT IS THE GPS
OPERATIONS CENTER AT HTTPS://GPS.AFSPC.AF.MIL/GPSOC/, DSN 560-2541, COMM 719-567-2493,
GPSOPERATIONSCENTER@US.AF.MIL,
B. CIVIL NON-AVIATION - NAVCEN AT 703-313-5900, HTTPS://WWW.NAVCEN.USCG.GOV,
C. CIVIL AVIATION - FAA NASEO AT 540-422-4178, HTTPS://WWW.FAA.GOV/AIR TRAFFIC/NAS/GPS REPORTS/,
D. MILITARY ALTERNATE - COMBINED SPACE OPERATIONS CENTER, DSN 275-3522, COMM 805-605-3522,
JSPOCCOMBATOPS@VANDENBERG.AF.MIL
```

Figure 20-1 Sample Operational Advisory

ICD240-167:

Section Number:

20.3.0-1

WAS:

Section one lists operational satellites by PRN number, assigned plane, and clock in current use. Subsection 1.A previously identified operational satellites in Block I. However, these satellites are no longer operational, so this subsection includes the word "NONE." Subsection 1.B identifies satellites within Block II that are currently in use. Section 1.C identifies satellites within Block III that are currently in use. The example data shown for Section 1 is not meant to represent the actual GPS constellation configuration. The abbreviations CS and RB are used to indicate Cesium and Rubidium clocks, respectively. An example of section one of the OA is illustrated in Figure 20-3

Redlines:

Section one lists operational satellites by PRN number, assigned plane, and clock in current use. Subsection 1.A previously identified operational satellites in Block I. However, these satellites are no longer operational, so this subsection includes the word "NONE." Subsection 1.B identifies satellites within Block II that are currently in use. Section 1.C identifies satellites within Block III that are currently in use. The example data shown for Section 1 is not meant to represent the actual GPS constellation configuration. The abbreviations CS and RB are used to indicate Cesium and Rubidium clocks, respectively. -An example of section one of the OA is illustrated in Figure 20-3.

IS:

Section one lists operational satellites by PRN number, assigned plane, and clock in current use. Subsection 1.A previously identified operational satellites in Block I. However, these satellites are no longer operational, so this subsection includes the word "NONE." Subsection 1.B identifies satellites within Block II that are currently in use. Section 1.C identifies satellites within Block III that are currently in use. The example data shown for Section 1 is not meant to represent the actual GPS constellation configuration. The abbreviations CS and RB are used to indicate Cesium and Rubidium clocks, respectively. An example of section one of the OA is illustrated in Figure 20-3.

ICD240-333 : Insertion after object ICD240-318: Figure 20-3 OA Section One
Section Number: 20.3.0-4
WAS: N/A
Redlines : <inserted object=""></inserted>
IS : If no data are available, section one is denoted with "RESERVED." An example is illustrated in Figure 20-3a.
ICD240-334 : Insertion after object ICD240-333
Section Number: 20.3.0-5
WAS: N/A
Redlines : <inserted object=""></inserted>
IS:
1. RESERVED
ICD240-335 : Insertion after object ICD240-334
Section Number: 20.3.0-6
WAS: N/A
Redlines : <inserted object=""></inserted>
IS: Figure 20-3a OA Section One (No Data)

ICD240-176:

Section Number:

20.5.0-2

WAS:

```
3. REMARKS:
A. THE POINT OF CONTACT FOR GPS MILITARY OPERATIONAL SUPPORT IS THE GPS OPERATIONS CENTER AT (719)567-2541 OR DSN 560-2541.
B. CIVILIAN: FOR INFORMATION, CONTACT US COAST GUARD NAVCEN AT COMMERCIAL (703)313-5900 24 HOURS DAILY AND INTERNET HTTP://www.navcen.uscg.gov
C. MILITARY SUPPORT WEBPAGES CAN BE FOUND AT THE FOLLOWING HTTPS://GPS.AFSPC.AF.MIL/GPSOC
```

Figure 20-5 OA Section Three

Redlines:

```
A. THE POINT OF CONTACT FOR GPS MILITARY OPERATIONAL SUPPORT IS THE GPS

OPERATIONS CENTER AT 719-567-2541 OR DSN 560-2541.

B. CIVILIAN: FOR INFORMATION, CONTACT US COAST GUARD NAVCEN AT

COMMERCIAL 703-313-5900 24 HOURS DAILY AND INTERNET

HTTPS://www.navcen.uscg.gov

C. MILITARY SUPPORT WEBPAGES CAN BE FOUND AT THE FOLLOWING

HTTPS://GPS.AFSPC.AF.MIL/GPS OR HTTPS://GPS.AFSPC.AF.MIL/GPSOC

3. REMARKS:

A. THE POINT OF CONTACT FOR GPS MILITARY OPERATIONAL SUPPORT IS THE GPS

OPERATIONS CENTER AT HTTPS://GPS.AFSPC.AF.MIL/GPSOC/, DSN 560-2541, COMM 719-567-2493,

GPSOPERATIONSCENTER@US.AF.MIL,

B. CIVIL NON-AVIATION - NAVCEN AT 703-313-5900, HTTPS://www.navcen.uscg.gov,

C. CIVIL AVIATION - FAA NASEO AT 540-422-4178,

HTTPS://www.FAA.GOV/AIR_TRAFFIC/NAS/GPS_REPORTS/,

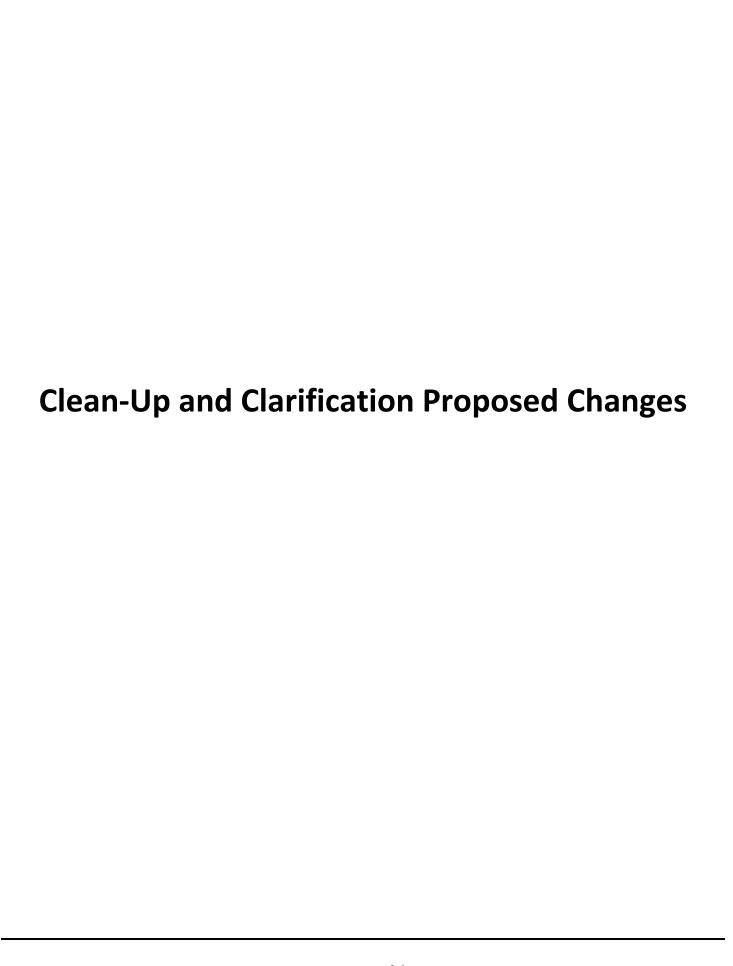
D. MILITARY ALTERNATE - COMBINED SPACE OPERATIONS CENTER, DSN 275-3522, COMM 805-605-3522,

JSPOCCOMBATOPS@VANDENBERG.AF.MIL
```

Figure 20-5 OA Section Three

```
3. REMARKS:
A. THE POINT OF CONTACT FOR GPS MILITARY OPERATIONAL SUPPORT IS THE GPS
OPERATIONS CENTER AT HTTPS://GPS.AFSPC.AF.MIL/GPSOC/, DSN 560-2541, COMM 719-567-2493,
GPSOPERATIONSCENTER@US.AF.MIL,
B. CIVIL NON-AVIATION - NAVCEN AT 703-313-5900, HTTPS://www.navcen.uscg.gov,
C. CIVIL AVIATION - FAA NASEO AT 540-422-4178,
HTTPS://www.FAA.GOV/AIR_TRAFFIC/NAS/GPS_REPORTS/,
D. MILITARY ALTERNATE - COMBINED SPACE OPERATIONS CENTER, DSN 275-3522, COMM 805-605-3522,
ISPOCCOMBATOPS@VANDENBERG.AF.MIL
```

Figure 20-5 OA Section Three



ICD240-17: **Section Number:** 1.3.0-6 WAS: The Boeing Company Redlines: <DELETED OBJECT> IS: <DELETED OBJECT> ICD240-38: **Section Number:** 2.1.0-15 WAS: IS-GPS-200 Navstar GPS Space Segment/Navigation User Interface **Current Version** GP-03-001 GPS Interface Control Working Group (ICWG) Charter 14 November 2003 MOA Memorandum of Agreement Between the United States Coast Guard and the United States Space February 1992 Command, "Distribution of Navstar Global Positioning System (GPS) Status Information" (Signatories: USCG/G-NRN and USSPC/DOO) MOA Support Agreement Between the United States Coast Guard and the United States Air Force Space February 1996 Command, "Distribution of Navstar Global Positioning System (GPS) Status Information" (Signatories: Commanding Officer NAVCEN and AFSPC/DOO) MOA Memorandum of Agreement between the Joint Functional Component Command for Space; the US February 2010 Coast Guard Navigation Center and the FAA National Operations Control Center with respect to the Support of Users of the Navstar Global Positioning System

MOA Interagency Memorandum of Agreement with
Respect to Support of Users of the Navstar Global

Positioning System (GPS)

Redlines:

IS-GPS-200 Navstar GPS Space Segment/Navigation User

Current Version Interface

GP-03-001 GPS Interface Control Working Group (ICWG)

Charter

14 November 2003 Current Version

June 2014

MOA Memorandum of Agreement Between the United

February 1992 States Coast Guard and the United States Space

Command, "Distribution of Navstar Global Positioning

System (GPS) Status Information"

(Signatories: USCG/G-NRN and USSPC/DOO)

MOA Support Agreement Between the United States Coast

February 1996 Guard and the United States Air Force Space

Command, "Distribution of Navstar Global Positioning

System (GPS) Status Information"

(Signatories: Commanding Officer NAVCEN and

AFSPC/DOO)

MOA Memorandum of Agreement between the Joint

February 2010 Functional Component Command for Space; the US

Coast Guard Navigation Center and the FAA National Operations Control Center with respect to the Support of Users of the Navstar Global Positioning

System

MOA Interagency Memorandum of Agreement with Respect

to Support of Users of the Navstar Global Positioning

System (GPS)

IS:

Version

IS-GPS-200 Navstar GPS Space Segment/Navigation User

Current Version Interface

GP-03-001 GPS Interface Control Working Group (ICWG)

Current Version Charter

MOA Interagency Memorandum of Agreement with Respect

Current Version to Support of Users of the Navstar Global Positioning

System (GPS)

ICD240-128:

Section Number:

10.3.1.0-1

WAS:

The first line of the header includes the title "NOTICE ADVISORY TO NAVSTAR USERS (NANU)" and the assigned identification (ID) number for that NANU message. The ID number consists of the four-digit year followed by a sequentially assigned three-digit number which begins at 001 for the first NANU on the first day of a new year. The second line identifies the subject of the message including the Space Vehicle Number (SVN), SV Pseudo Random Noise (PRN) number, type of message, and effective dates for the event. The date is in Julian day-of-year format (JDAY), numbered from 001 to 366, and the time is Zulu referenced in a 24-hour, two digit hour (HH), two digit minute (MM) format. The NANU header is illustrated in Figure 10-5.

Redlines:

The first line of the header includes the title "NOTICE ADVISORY TO NAVSTAR USERS (NANU)" and the assigned identification (ID) number for that NANU message. The ID number consists of the four-digit year followed by a sequentially assigned three-digit number which begins at 001 for the first NANU on the first day of a new year. The second line identifies the subject of the message including the Space Vehicle Number (SVN), SV Pseudo Random Noise (PRN) number, type of message, and effective dates for the event. The date is in Julian day-of-year format (JDAY), numbered from 001 to 366, and the time is Zulu referenced in a 24-hour, two digit hour (HH), two digit minute (MM) format. The NANU header is illustrated in Figure 10-5.

IS:

The first line of the header includes the title "NOTICE ADVISORY TO NAVSTAR USERS (NANU)" and the assigned identification (ID) number for that NANU message. The ID number consists of the four-digit year followed by a sequentially assigned three-digit number which begins at 001 for the first NANU of a new year. The second line identifies the subject of the message including the Space Vehicle Number (SVN), SV Pseudo Random Noise (PRN) number, type of message, and effective dates for the event. The date is in Julian day-of-year format (JDAY), numbered from 001 to 366, and the time is Zulu referenced in a 24-hour, two digit hour (HH), two digit minute (MM) format. The NANU header is illustrated in Figure 10-5.

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ı	ı	u	Z	4	u	-/	u	•	

Section Number :

40.4.0-6

WAS:

Table 40-II Almanac Description (Sheet 1 of 2)

Line No.	Almanac Name	Description	Units	Range	Accuracy	Precision
1	Number of records	The number of satellite almanac records contained in the file	Records	0 to 32	1	2 significant digits
	Name of Almanac	Descriptive name for the Almanac in the file	N/A	Any combination of valid ASCII characters	N/A	24 significant characters
2	GPS Week Number	The almanac reference week number (WNa) for all almanac data in the file	Weeks	0 to 1024 *	1	4 significant digits
	GPS Time of Applicability	The number of seconds since the beginning of the almanac reference week. The almanac reference time (toa) for all almanac data in the file	Second	0 to 602,112	1	6 significant digits
3		Blank line f		spacing		
	I		Format	T	I	
R-1	PRN Number	The satellite PRN number. This is a required data item as it is the GPS user's primary means of identifying GPS satellites	None	1 to 32	None	2 significant digits
R-2	SVN	The SV reference number. It is equivalent to the space vehicle identification (SVID) number of the SV	None	0 to 255 (zero denotes that this field is empty)	None	3 significant digits
R-3	Average URA Number	The satellite "average" URA** number. This is not an item in the raw almanac file but is based on the average URA value transmitted by this satellite in subframe 1. The URA is taken in the range of 730 hours	None	0 to 15	1	2 significant digits
R-4	Eccentricity	This defines the amount of the orbit deviation from a circular orbit (e)**	Unitless	0 to 3.125 E-2	4.77 E-7	7 significant digits

b	Satellite almanac orbital "inclination angle offset" $(\delta_i)^{**}$ This does not	circles	-6.25 E-2 to +6.25 E-2	1.91 E-6	7 significant digits
	include the 0.30 semicircle reference value (i ₀)**				

Redlines :

Table 40-II Almanac Description (Sheet 1 of 2)

Line No.	Almanac Name	Description	Units	Range	Accuracy	Precision
1	Number of records	The number of satellite almanac records contained in the file	Records	0 to 32	1	2 significant digits
	Name of Almanac	Descriptive name for the Almanac in the file	N/A	Any combination of valid ASCII characters	N/A	24 significant characters
2	GPS Week Number	The almanac reference week number (WNa) for all almanac data in the file	Weeks	0 to 1024 <u>3</u> *	1	4 significant digits
	GPS Time of Applicability	The number of seconds since the beginning of the almanac reference week. The almanac reference time (toa) for all almanac data in the file	Second	0 to 602,112	1	6 significant digits
3		Blank line t	for format	spacing		
	7		Format	r	T	
R-1	PRN Number	The satellite PRN number. This is a required data item as it is the GPS user's primary means of identifying GPS satellites	None	1 to 32	None	2 significant digits
R-2	SVN	The SV reference number. It is equivalent to the space vehicle identification (SVID) number of the SV	None	0 to 255 (zero denotes that this field is empty)	None	3 significant digits
R-3	Average URA Number	The satellite "average" URA** number. This is not an item in the raw almanac file but is based on the average URA value transmitted by this satellite in subframe 1. The URA is taken in the range of 730 hours	None	0 to 15	1	2 significant digits

R-4	Eccentricity	This defines the amount of the orbit deviation from a circular orbit (e)**	Unitless	0 to 3.125 E-2	4.77 E-7	7 significant digits
b	Inclination Offset	Satellite almanac orbital "inclination angle offset" $(\delta_i)^{**}$ This does not include the 0.30 semicircle reference value $(i_0)^{**}$	Semi circles	-6.25 E-2 to +6.25 E-2	1.91 E-6	7 significant digits

Table 40-II Almanac Description (Sheet 1 of 2)

Line No.	Almanac Name	Description	Units	Range	Accuracy	Precision
1	Number of records	The number of satellite almanac records contained in the file	Records	0 to 32	1	2 significant digits
	Name of Almanac	Descriptive name for the Almanac in the file	N/A	Any combination of valid ASCII characters	N/A	24 significant characters
2	GPS Week Number	The almanac reference week number (WNa) for all almanac data in the file	Weeks	0 to 1023 *	1	4 significant digits
	GPS Time of Applicability	The number of seconds since the beginning of the almanac reference week. The almanac reference time (toa) for all almanac data in the file	Second	0 to 602,112	1	6 significant digits
3		Blank line t	for format	spacing		
		Record	Format			
R-1	PRN Number	The satellite PRN number. This is a required data item as it is the GPS user's primary means of identifying GPS satellites	None	1 to 32	None	2 significant digits
R-2	SVN	The SV reference number. It is equivalent to the space vehicle identification (SVID) number of the SV	None	0 to 255 (zero denotes that this field is empty)	None	3 significant digits

R-3	Average URA Number	The satellite "average" URA** number. This is not an item in the raw almanac file but is based on the average URA value transmitted by this satellite in subframe 1. The URA is taken in the range of 730 hours		0 to 15	1	2 significant digits
R-4	Eccentricity	This defines the amount of the orbit deviation from a circular orbit (e)**	Unitless	0 to 3.125 E-2	4.77 E-7	7 significant digits
b	Inclination Offset	Satellite almanac orbital "inclination angle offset" $(\delta_i)^{**}$ This does not include the 0.30 semicircle reference value $(i_0)^{**}$	Semi circles	-6.25 E-2 to +6.25 E-2	1.91 E-6	7 significant digits